

Collocated Facilities Analysis for Waste Area Group 7, Operable Unit 7-13/14

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October 2005

**Idaho
Cleanup
Project**

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October 2005

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Idaho Falls, Idaho 83415**

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ABSTRACT

This report documents the analysis of collocated facilities at Waste Area Group 7. The analysis supports the comprehensive remedial investigation and feasibility study for Operable Unit 7-13/14. Collocated facilities are defined as buildings, structures, or processes that are proximal or share the same area as Waste Area Group 7—Radioactive Waste Management Complex at the Idaho National Laboratory Site—and may contribute to cumulative environmental impacts.

The purpose of this analysis is to ensure that facilities not investigated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 will not have a detrimental effect on human health or the environment, and to support the comprehensive remedial investigation and feasibility study.

This analysis included a review of operational activities, current facilities, management control procedures, and screening criteria for eliminating or retaining facilities within Waste Area Group 7. The primary determination based on the screening criteria is that no collocated facilities within Waste Area Group 7 have the potential to affect comprehensive risk, nor do any threaten imminent release of hazardous or radiological material.

This Revision 1 is an update to the original report to reflect both construction of new facilities and removal of facilities that were included in the original report. The new facilities have been analyzed using the same criteria as in the original report, and the existing facilities have been reviewed to ensure that the original analysis is still valid for those facilities.

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ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
INL	Idaho National Laboratory
MCP	management control procedure
NFPA	National Fire Protection Association
OU	operable unit
RCRA	Resource Conservation and Recovery Act
RWMC	Radioactive Waste Management Complex
SAR	safety analysis report
SDA	Subsurface Disposal Area
TRU	transuranic
TSA	Transuranic Storage Area
WAG	waste area group
WIPP	Waste Isolation Pilot Plant
WMF	Waste Management Facility

Collocated Facilities Analysis for Waste Area Group 7, Operable Unit 7-13/14

1. INTRODUCTION

This report documents the analysis of collocated facilities in Waste Area Group (WAG) 7.^a WAG 7 is the Radioactive Waste Management Complex (RWMC) at the Idaho National Laboratory (INL) Site (see Figure 1 for the map of INL). This analysis supports the comprehensive evaluation of WAG 7. This Revision 1 is an update to the original report to reflect both construction of new facilities and removal of facilities that were included in the original report. The new facilities have been analyzed using the same criteria as in the original report, and the existing facilities have been reviewed to ensure that the original analysis is still valid for those facilities. Collocated facilities are defined as buildings, structures, and processes that are in or near WAG 7 and that may contribute to cumulative environmental impacts.

Facilities at RWMC are under the direction of two projects: the Idaho Cleanup Project and the Advanced Mixed Waste Treatment Project. The Advanced Mixed Waste Treatment Project controls the following facilities:

- All facilities in the Transuranic Storage Area (TSA)
 - Except for Waste Management Facility (WMF) 714 and WMF-720 (in the Intermediate-Level Transuranic Storage Facility) and WMF-648 (a trailer used for monitoring the Intermediate-Level Transuranic Storage Facility vaults)
- WMF-611 and WMF-613 in the Administrative Area
- WMF-602 in the Operations Area.

The remaining facilities, including the exceptions listed for the Advanced Mixed Waste Treatment Project above, are the responsibility of the Idaho Cleanup Project.

1.1 Purpose

The RWMC is being evaluated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC § 9601 et seq.) as implemented by the INL-specific Federal Facility Agreement and Consent Order for the INL (DOE-ID 1991). Known or suspected sites were identified for evaluation. The agreement defines the WAG 7 boundary as the RWMC fenceline. The purpose of this analysis is to ensure that collocated facilities that were not identified for evaluation under CERCLA do not impact human health or the environment. Conclusions from this analysis will support the WAG 7 Operable Unit (OU) 7-13/14 comprehensive remedial investigation and feasibility study.

The analysis of WAG 7 collocated facilities included a review of the following at RWMC:

- Operational activities

^a The Federal Facility Agreement and Consent Order lists 10 WAGs for INL. Each WAG is subdivided into OUs. The RWMC is identified as WAG 7 and originally contained 14 OUs. Operable Unit 7-13 (transuranic pits and trenches remedial investigation and feasibility study) and OU 7-14 (WAG 7 comprehensive remedial investigation and feasibility study) were ultimately combined into the OU 7-13/14 comprehensive remedial investigation and feasibility study for WAG 7.

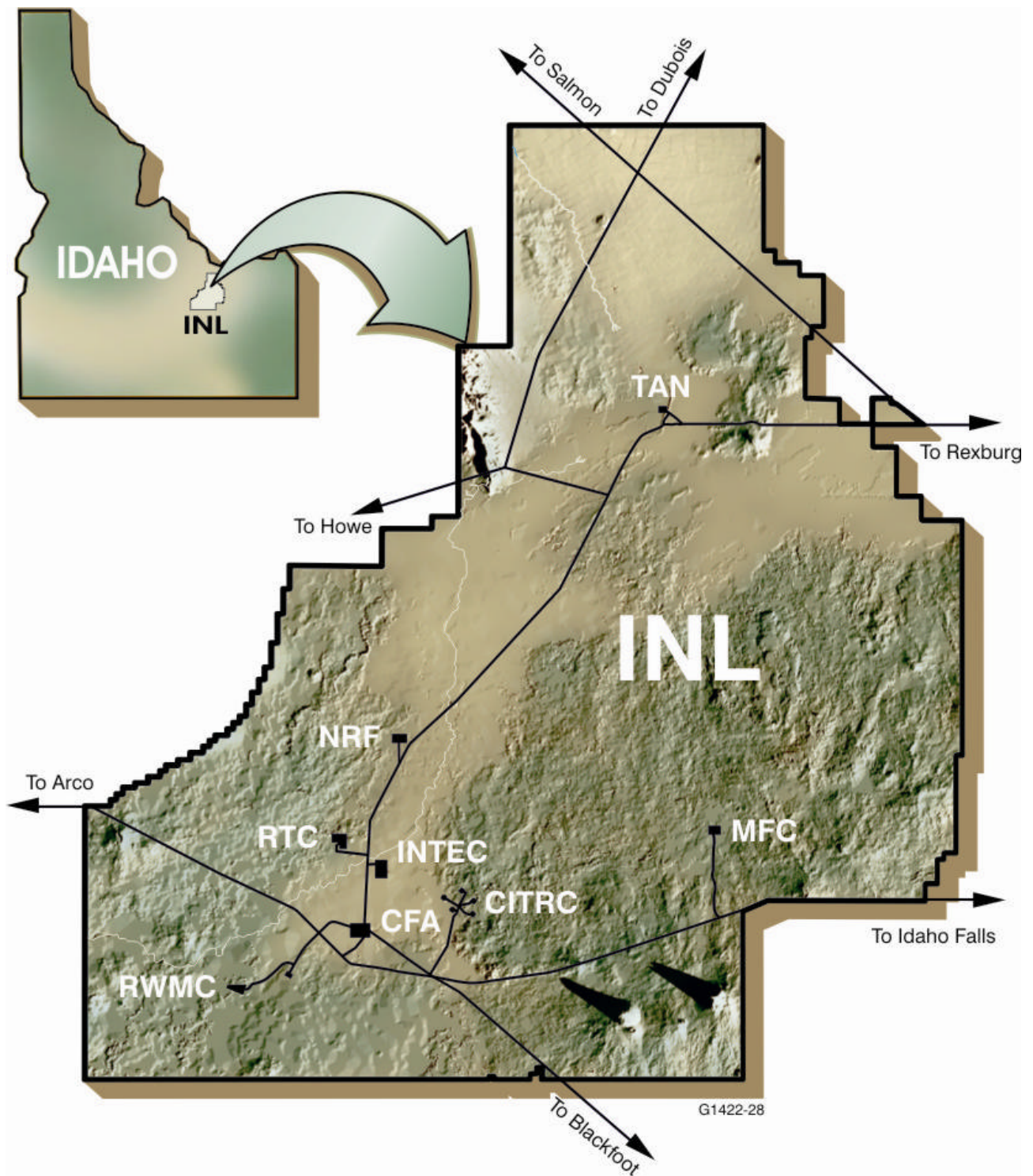


Figure 1. Map of the Idaho National Laboratory Site.

- Buildings and structures
- Projects
- Management control procedures (MCPs).

1.2 Scope

This report includes the analysis of: (1) all operational facilities, (2) facilities no longer being used for their original mission, and (3) facilities currently in standby or abandoned mode. Appendix A includes a list of all facilities collocated with WAG 7, including cargo containers currently being used for storage and temporary trailers located in the immediate area of RWMC not discussed in the main report.

1.3 Report Organization

The remaining sections of the report are summarized below:

- Section 2 describes the history and operational background of RWMC.
- Section 3 describes the methodology for screening the facilities.
- Section 4 lists the facilities at RWMC in terms of their function: transuranic storage, administration, operations, subsurface disposal, OU 7-10 Administrative Area, and facilities outside the boundaries of RWMC.
- Section 5 describes projects at RWMC.
- Section 6 reviews management controls at RWMC.
- Section 7 summarizes and reports conclusions.
- Section 8 contains the references cited throughout the report.
- Appendix A lists all facilities collocated with WAG 7.

2. OPERATIONAL BACKGROUND OF THE RADIOACTIVE WASTE MANAGEMENT COMPLEX

The RWMC was originally established in 1952 with the mission to provide safe disposal for solid radioactive waste associated with the development, testing, and analysis of nuclear and reactor applications. To support that mission, more than 50 buildings and structures were constructed at RWMC. Over time, existing RWMC facilities have been modified to fit contemporary mission objectives.

In the early 1950s, with the assistance of the U.S. Geological Survey, a 13-acre (5.3-ha) area that was isolated from other INL Site facilities was designated as the proposed site for RWMC. Environmental characterization of the proposed site found that the criteria of good surface drainage and the presence of clay sediments to exclude moisture had been met. After the proposed site was approved, the first trench for waste disposal was opened on July 8, 1952. From 1952 to 1954 only waste contaminated with beta- and gamma-emitting radionuclides from INL generators was buried at RWMC.

In 1954, RWMC began accepting transuranic (TRU) waste and commercial solid waste contaminated with TRU waste from the Rocky Flats Plant.^b The original 13-acre landfill was nearly filled by 1957 and expansion became necessary.

The 88-acre (35.6-ha) Subsurface Disposal Area (SDA) was established in 1958 to contain all RWMC shallow subsurface TRU waste. Before 1957, only trenches were used for buried waste disposal. After 1957, pits also were used for disposal. The SDA continued to receive TRU waste for disposal in shallow pits through the 1960s. Environmental monitoring programs were expanded during this period to include soil moisture measurements and radiation measurements along the perimeter of RWMC. During the mid-1960s, waste disposal methods were improved and personnel safety and environmental protection were increased.

From January 1960 to May 1963, RWMC accepted beta-gamma waste from private sources (e.g., universities, hospitals, and other research institutions). This service was discontinued after commercial burial sites for contaminated waste from private industry became available.

In 1970, the Atomic Energy Commission—later renamed the U.S. Department of Energy (DOE)—adopted a new policy for managing TRU waste. In support of the Atomic Energy Commission's new management policy for TRU waste, the TSA was established adjacent to the SDA. All waste contaminated with TRU radionuclide levels of higher than 10 nCi/g was to be placed in interim storage with a minimum 20-year design. Asphalt pads were constructed on which the containerized TRU waste was stacked and then covered with plywood, plastic sheeting, and 91 cm (3 ft) of soil. Research projects were conducted during the last half of the 1970s to assess TRU waste-retrieval methods from both the SDA and the TSA to support anticipated retrieval of TRU waste and shipment to a federal repository. The Waste Isolation Pilot Plant (WIPP), a deep geological federal repository, was established near Carlsbad, New Mexico, to provide a facility to accept stored and newly defense-generated TRU waste for disposal.

Environmental monitoring at RWMC was established in 1973. Sampling of the soil, air, surface water, and aquifer was performed on a regular basis. Monitoring has been expanded since that time and now includes monitoring of biota. The results of all monitoring samples to date have shown that RWMC disposal and storage have had only localized effects on the environment.

Since 1997, all TRU waste not under earthen cover has been transferred to Type I and II storage modules that are approved in accordance with the Resource Conservation and Recovery Act (RCRA) (42 USC § 6901 et seq.). The Type I storage module provides waste characterization and interim storage. Type II storage modules provide storage for waste containers. Both are RCRA-compliant buildings at RWMC. Type I and II storage modules are discussed further in Section 4. After processing at the Type I storage module, containers were moved to one of the following facilities:

- Type II storage modules for storage before certification and preparation for final disposal or treatment
- Stored Waste Examination Pilot Plant (WMF-610) for characterization of container contents
- Argonne National Laboratory-West (now the Materials and Fuels Complex at the INL) for additional waste characterization and verification.

b. The Rocky Flats Plant is located 16 mi (26 km) northwest of Denver. In the mid-1990s, Rocky Flats Plant was renamed the Rocky Flats Environmental Technology Site, and in the late 1990s it was renamed again, to its present name, the Rocky Flats Plant Closure Project.

After remote examination of container contents, the containers of waste were moved to the Type II storage modules for storage. Waste stored in the Type II storage modules will be certified and ultimately will be transferred to WIPP for final disposal or for treatment either on or off the INL Site.

A similar characterization process has been followed since the inception of the Advanced Mixed Waste Treatment Project. Additional characterization capabilities have been installed in facilities at the TSA. The coring and visual examination capabilities that were previously performed at the Materials and Fuels Complex are now being performed in WMF-634, a Type II storage module being used for characterization activities. The Advanced Mixed Waste Treatment Project is discussed in more detail in Section 5.

3. SCREENING METHODOLOGY

The screening methodology was applied to all collocated facilities at RWMC. This analysis involved investigating past and current uses of facilities and applying screening criteria to eliminate facilities that would not pose potential threats of hazardous or radiological release or that were covered through existing MCPs. The general screening process is outlined below. Any facility meeting one of the following four screening criteria was eliminated from further analysis.

- **Criterion 1**—Facilities that have not processed, stored, or used hazardous substances. This includes personnel offices, nonhazardous material storage areas, training and security buildings, personnel support buildings, nonhazardous liquid storage water facilities (i.e., raw water storage tanks and towers), and electrically driven raw water pumping facilities.
- **Criterion 2**—Facilities that house radioactive waste or radiological or hazardous substances below threshold quantities (threshold quantities), as specified in Superfund Amendment and Reauthorization Act Title III, “Consolidated List of Chemicals” (40 CFR 302.4, Table 302.4).
- **Criterion 3**—Facilities that have processed, stored, or used hazardous substances (above threshold quantities) that could impact the cumulative risk at WAG 7 and are currently operated with appropriate management controls.
- **Criterion 4**—Facilities that have processed, stored, or used radiological materials, RCRA-regulated hazardous substances that could impact the cumulative risk at WAG 7 and are currently operated with appropriate management controls.

A map displaying the location of the facilities at RWMC is presented in Figure 2. Table 1 is a list of the WAG 7 collocated facilities. Collocated facility descriptions, hazard classifications, management controls, and screening criteria are provided in Table 2.

Table 1. Collocated facilities in Waste Area Group 7.

Facility Number	Facility Name	Location
WMF-601	Radiological Control Field Office	Operations Area
WMF-602	RWMC Highbay	Operations Area
WMF-603	RWMC Pumphouse	Operations Area
WMF-604	Change room and lunchroom building	Operations Area
WMF-605	U.S. Geological Survey Well House 87	Outside
WMF-606	U.S. Geological Survey Well House 88	Outside
WMF-609	Heavy Equipment Storage Building	Operations Area

Table 1. (continued).

Facility Number	Facility Name	Location
WMF-609A, WMF-609B	Resource Conservation and Recovery Act 90-Day Storage Area	Operations Area
WMF-610	Stored Waste Examination Pilot Project Building	Transuranic Storage Area
WMF-611	Operations Support Facility	Administration Area
WMF-613	Office building and operational support facility	Administration Area
WMF-614	Propane vaporizer housing (shed)	Transuranic Storage Area
WMF-615	Stored Waste Examination Pilot Plant Drum Venting System Building	Transuranic Storage Area
WMF-617	Stored Waste Examination Pilot Plant Maintenance Facility	Transuranic Storage Area
WMF-618	Transuranic Packaging and Transport-II Container Loading Facility	Transuranic Storage Area
WMF-619	Communications building and dial room	Administration Area
WMF-620	Work Control Center Facility (Operations) Trailer	Operations Area
WMF-621	Work Control Center Support Facility (Operations) Trailer	Operations Area
WMF-622	Office annex trailer	Administration Area
WMF-624	Fire riser enclosure	Transuranic Storage Area
WMF-627	Propane pump enclosure	Transuranic Storage Area
WMF-628	Type II Storage Module No. 1	Transuranic Storage Area
WMF-629	Type II Storage Module No. 2	Transuranic Storage Area
WMF-630	Type II Storage Module No. 3	Transuranic Storage Area
WMF-631	Type II Storage Module No. 4	Transuranic Storage Area
WMF-632	Type II Storage Module No. 5	Transuranic Storage Area
WMF-633	Type II Storage Module No. 6	Transuranic Storage Area
WMF-634	Type II Storage Module No. 7	Transuranic Storage Area
WMF-635	Type I Storage Module	Transuranic Storage Area
WMF-636	Transuranic Storage Area Retrieval Enclosure	Transuranic Storage Area
WMF-637	Operations Control Building	Administration Area
WMF-639	Firewater pumphouse No. 2	Operations Area
WMF-641	Vapor Vacuum Extraction Monitoring Well D02	Subsurface Disposal Area
WMF-643	Vapor Vacuum Extraction Monitoring Well 8-02D	Subsurface Disposal Area
WMF-645	Construction support trailer	Operations Area
WMF-646	Field support trailer	Operations Area
WMF-648	Intermediate-Level Transuranic Storage Facility Trailer	Transuranic Storage Area
WMF-653	Office annex No. 2 trailer	Administration Area
WMF-655	Material Handling Facility	Operations Area
WMF-656	Maintenance Facility	Operations Area

Table 1. (continued).

Facility Number	Facility Name	Location
WMF-657	Construction field support trailer	Operations Area
WMF-658	RWMC office building	Administration Area
WMF-660	Automatic transfer switch building	Transuranic Storage Area
WMF-661	Hazardous materials storage	Operations Area
WMF-664	Warehouse	OU 7-10 Administrative Area
WMF-665	Truck Off-Loading Facility	OU 7-10 Administrative Area
WMF-666	Retrieval building	OU 7-10 Administrative Area
WMF-667	Treatment/processing building	OU 7-10 Administrative Area
WMF-668	Utility building	OU 7-10 Administrative Area
N/A	Radiological Control Trailer	OU 7-10 Administrative Area
N/A	Operations office	OU 7-10 Administrative Area
N/A	Cooling tower building	OU 7-10 Administrative Area
N/A	Vehicle maintenance shop	OU 7-10 Administrative Area
N/A	Carpenter shop	OU 7-10 Administrative Area
WMF-671	Weather Enclosure Structure	Subsurface Disposal Area
WMF-676	Advanced Mixed Waste Treatment Facility	Transuranic Storage Area
WMF-677	Advanced Mixed Waste Treatment Project Office Complex	Transuranic Storage Area
WMF-678	Advanced Mixed Waste Treatment Project Office Complex	Transuranic Storage Area
WMF-679	Advanced Mixed Waste Treatment Project Workshop	Transuranic Storage Area
WMF-680	Construction Operations Trailer	Outside
WMF-681	Construction Operations Trailer	Outside
WMF-684	Assembly/break building	Transuranic Storage Area
WMF-685	Accountability building	Outside
WMF-686	Advanced Mixed Waste Treatment Project shower trailer	Transuranic Storage Area
WMF-687	Break trailer—retrieval staff	Transuranic Storage Area
WMF-688	Break trailer	Transuranic Storage Area
WMF-689	Rolling Stock Maintenance Facility	Transuranic Storage Area

Table 1. (continued).

Facility Number	Facility Name	Location
WMF-690	Carpenter shop	Transuranic Storage Area
WMF-691	Warehouse office trailer	Transuranic Storage Area
WMF-692	Site warehouse	Transuranic Storage Area
WMF-693	Consumable storage	Transuranic Storage Area
WMF-694	Training facility	Transuranic Storage Area
WMF-696	Storage facility	Transuranic Storage Area
WMF-697	Retrieval Enclosure (Accelerated Retrieval Project)	Subsurface Disposal Area
N/A	Two propane tanks west WMF-697	Subsurface Disposal Area
N/A	Four propane tanks south WMF-697	Subsurface Disposal Area
WMF-699	Assembly trailer restroom	Transuranic Storage Area
WMF-703	Propane storage tank	Transuranic Storage Area
WMF-709	Water storage tank	Operations Area
WMF-711	Air Support Building-II Foundation, Floor, and Airlock	Transuranic Storage Area
WMF-714	Intermediate-Level Transuranic Storage Facility Pad No. 1	Transuranic Storage Area
WMF-720	Intermediate-Level Transuranic Storage Facility Pad No. 2	Transuranic Storage Area
WMF-723	Transuranic Storage Area Retrieval Airlock	Transuranic Storage Area
WMF-724	Glycol Loop Enclosure	Transuranic Storage Area
WMF-727	Firewater storage tank	Operations Area
WMF-731	RWMC sewage lagoon	Outside
WMF-732	Propane tank	Administration Area
WMF-734	Standby Generator Enclosure	Transuranic Storage Area
WMF-735	Diesel tank	Transuranic Storage Area
WMF-737	Fuel tank	Operations Area
WMF-738	Propane tank	Operations Area
WMF-750	Temporary fire riser building	Operations Area
WMF-752	Propane storage tank	Transuranic Storage Area
WMF-1601	Training office trailer	Transuranic Storage Area
WMF-1602	Break room trailer	Transuranic Storage Area
WMF-1603	Break room trailer	Transuranic Storage Area
WMF-1604	Shift Team Lead Office Trailer	Transuranic Storage Area
WMF-TR-1	Accelerated Retrieval Project Sample Support Trailer	Subsurface Disposal Area
WMF-TR-2	Accelerated Retrieval Project Operations Support Trailer	Subsurface Disposal Area
WMF-TR-3	Accelerated Retrieval Project Nondestructive Assay East Trailer	Subsurface Disposal Area

Table 1. (continued).

Facility Number	Facility Name	Location
WMF-TR-4	Accelerated Retrieval Project Nondestructive Assay West Trailer	Subsurface Disposal Area
WMF-TR-6	Accelerated Retrieval Project Men's Change Trailer	Subsurface Disposal Area
WMF-TR-7	Accelerated Retrieval Project Women's Change Trailer	Subsurface Disposal Area
WMF-CT-1	Commissioning Trailer #1	Transuranic Storage Area
WMF-CT-2	Commissioning Trailer #2	Transuranic Storage Area
WMF-CT-5	Commissioning Trailer #5	Transuranic Storage Area
WMF-CT-7	Commissioning Trailer #7	Transuranic Storage Area
WMF-CT-8	Commissioning Trailer #8	Transuranic Storage Area
N/A	Diesel tanks	Subsurface Disposal Area
N/A	North Administrative Trailer—Cold Test Pit	Outside
N/A	Support Trailer—Cold Test Pit	Outside
N/A	South Administrative Trailer—Cold Test Pit	Outside
N/A	North Yurt—Cold Test Pit	Outside
N/A	South Yurt—Cold Test Pit	Outside
N/A	North Test Pits—Cold Test Pit	Outside
N/A	South Test Pits—Cold Test Pit	Outside
N/A	Cold Test Pit North	Outside
N/A	West Storage Area	Outside

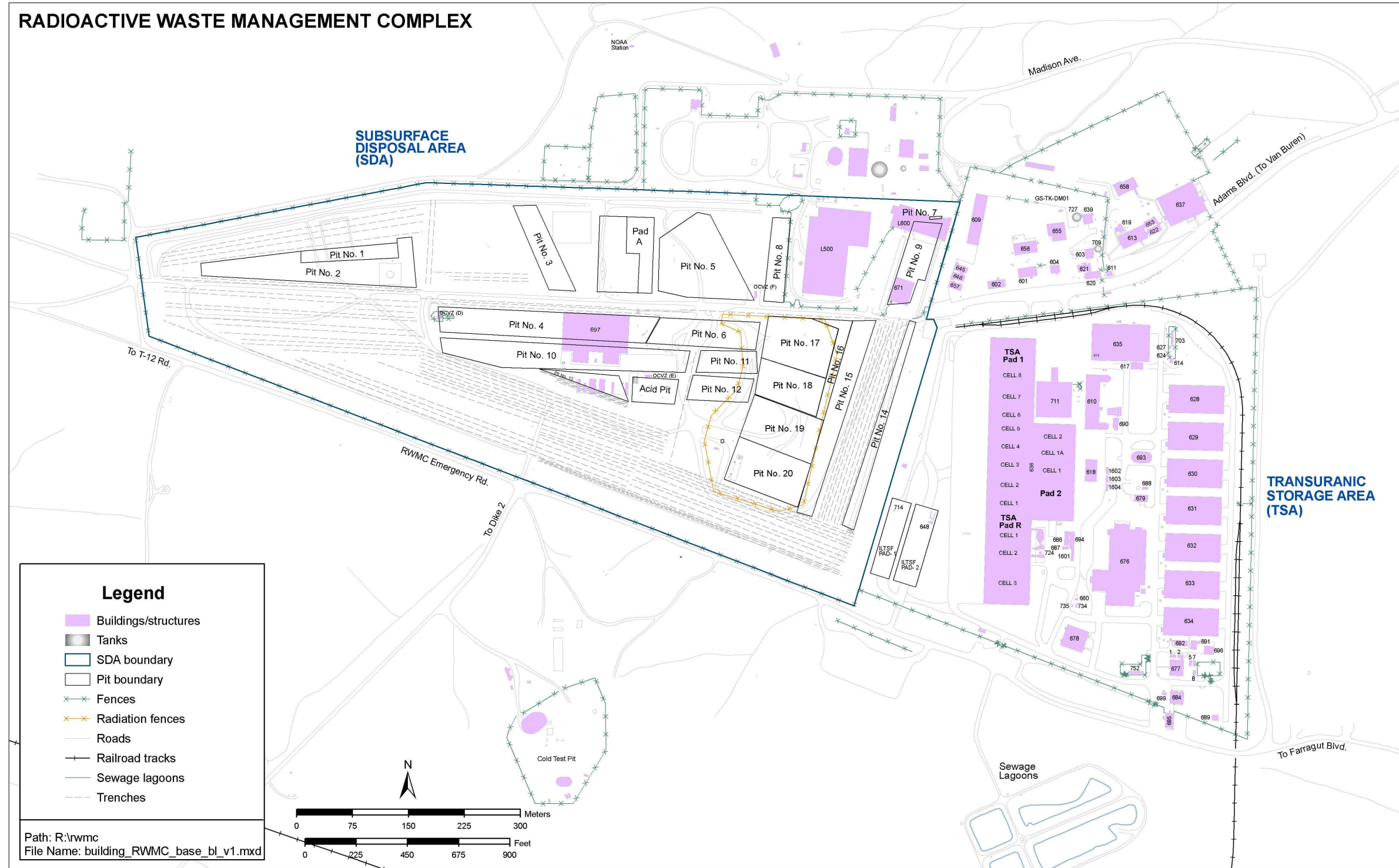


Table 2. Descriptions, hazard classifications, management controls, and screening criteria for facilities at the Radioactive Waste Management Complex.

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-601 Radiological Control Field Office	A 469-m ² (5,044-ft ²) steel frame metal building with offices, a radiological control technician laboratory, and lunchrooms, break rooms, and locker rooms for the radiological control technicians.		Safety analysis report (SAR), ^b National Environmental Policy Act, ^c hazard assessment, ^b and contingency plan ^d	Criterion 2: No hazardous or radiological materials above threshold quantity.
WMF-602 ^e RWMC Highbay	A 222-m ² (2,389-ft ²) steel frame modular multipurpose facility to support operations.		SAR, hazard assessment, and contingency plan	Criterion 2: No hazardous or radiological material above threshold quantity.
WMF-603 RWMC Pumphouse	A water storage area (129 m ² [1,387 ft ²]) containing fire and domestic water for the RWMC area, a propane emergency generator, and diesel and electric fire pumps.		Not required	Criterion 1: No hazardous or radiological material.
WMF-604 Change room and lunchroom	A 118-m ² (1,272-ft ²) metal building with a lunchroom and change and shower rooms for operations personnel.		Not required	Criterion 1: No hazardous or radiological material.
WMF-605 U.S. Geological Survey Well House 87	U.S. Geological Survey monitoring Well #87, a 3.4-m ² (37-ft ²) white shed located north of the Subsurface Disposal Area south of the Engineered Test Barrier.		Not required	Criterion 1: No hazardous or radiological material.
WMF-606 U.S. Geological Survey Well House 88	U.S. Geological Survey monitoring Well #88, white shed located south of the Cold Test Pit.		Not required	Criterion 1: No hazardous or radiological material.
WMF-609 Heavy Equipment Storage Building	A 1,037-m ² (11,166-ft ²) shelter and maintenance area for large mobile equipment.		Not required	Criterion 2: No hazardous or radiological material above threshold quantity.
WMF-609A and WMF-609B RCRA 90-Day Storage Area	RCRA 90-Day Storage Area, a 2.3-m ² (25-ft ²) metal storage building.		SAR, hazard assessment, and contingency plan	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-610 ^c Stored Waste Examination Pilot Project Building	A 1,074-m ² (11,557-ft ²) preengineered metal structure used for real-time radiography, nondestructive assay, and other transuranic waste certification activities.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated hazardous material.
WMF-611 ^c Operations Support Facility	A 37-m ² (400-ft ²) single story steel framed prefabricated modular building used for office space.		Not required	Criterion 1: No hazardous or radiological material.
WMF-613 ^c Office building and operational support facility	A 37-m ² (400-ft ²) steel framed prefabricated modular building containing office space.		Not required	Criterion 1: No hazardous or radiological material.
WMF-614 ^c Propane vaporizer housing	A 22-m ² (238-ft ²) steel framed prefabricated modular building housing propane vaporizing equipment.		NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
WMF-615 ^c Stored Waste Examination Pilot Plant Drum Venting System Building	A 125-m ² (1,345-ft ²) internal structure within WMF-635 used for venting waste drums.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated hazardous material.
WMF-617 Stored Waste Examination Pilot Plant Maintenance Facility	A 139-m ² (1,500-ft ²) steel framed prefabricated modular building used for general maintenance work.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-618 ^c Transuranic Package Transport Container-II Loading Facility	A 139-m ² (4,000-ft ²) two story single floor steel framed prefabricated modular building used to load payload assemblies in Transuranic Package Transport Container shipping casks.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-619 Communications building and dial room	An 88-m ² (945-ft ²) building used for RWMC telecommunications support equipment.		Not required	Criterion 1: No hazardous or radiological material.
WMF-620 Work Control Center Facility (Operations) Trailer	A 135-m ² (1,456-ft ²) single story trailer used for office space.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-621 Work Control Center Support Facility (Operations) Trailer	A 135-m ² (1,456-ft ²) single story trailer used for office space.		Not required	Criterion 1: No hazardous or radiological material.
WMF-622 Office annex trailer	A 135-m ² (1,456-ft ²) trailer providing office space for RWMC personnel.		Not required	Criterion 1: No hazardous or radiological material.
WMF-624 ^e Transuranic Storage Area propane system fire riser enclosure	A 5.9-m ² (64-ft ²) single story steel framed building housing the firewater system riser.		Not required	Criterion 1: No hazardous or radiological material.
WMF-627 ^c Propane pump enclosure	A 13.3-m ² (143-ft ²) prefabricated modular building housing the propane pump system.		NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
WMF-628 ^c Type II Storage Module No. 1	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³) used by the Advanced Mixed Waste Treatment Project for transuranic waste characterization.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-629 ^c Type II Storage Module No. 2	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-630 ^c Type II Storage Module No. 3	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-631 ^c Type II Storage Module No. 4	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-632 ^c Type II Storage Module No. 5	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-633 ^c Type II Storage Module No. 6	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-634 ^c Type II Storage Module No. 7	Transuranic ^f waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³). This facility is used by the Advanced Mixed Waste Treatment Project for transuranic waste characterization.	Category 3	SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-635 ^c Type I Storage Module	This 3,786-m ² (40,750-ft ²) storage module is a heated building used for transuranic waste characterization.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-636 ^c Transuranic Storage Area Retrieval Enclosure	A 29,171-m ² (313,994-ft ²) transuranic waste retrieval enclosure area.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-637 Operations Control Building	A 2,230-m ² (24,003-ft ²) area for offices and guard gate.		Not required	Criterion 1: No hazardous or radiological material.
WMF-639 Firewater pumphouse No. 2	A 66-m ² (1,787-ft ²) houses the primary electrical and diesel fire and a 1,136-L (300-gal) diesel tank.		NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
WMF-641 Vapor Vacuum Extraction Monitoring Well D02	A 1.5-m ² (16-ft ²) monitoring well shed.		Not required	Criterion 1: No hazardous or radiological material.
WMF-643 Vapor Vacuum Extraction Monitoring Well 89-02D	A 1.5-m ² (16-ft ²) monitoring well shed.		Not required	Criterion 1: No hazardous or radiological material.
WMF-645 Construction support trailer	A 146-m ² (1,568-ft ²) work support area for construction.		Not required	Criterion 1: No hazardous or radiological material.
WMF-646 Field support trailer	A 146-m ² (1,568-ft ²) office area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-648 Intermediate-Level Transuranic Storage Facility Trailer	A 20-m ² (215-ft ²) vault-monitoring area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-653 Office annex No. 2 trailer	A 112-m ² (1,206-ft ²) office area.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-655 Material Handling Facility	A 509-m ² (5,483-ft ²) material storage area.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-656 Maintenance Facility	A 465-m ² (5,005-ft ²) maintenance and fabrication area.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-657 Construction field support trailer	A 146-m ² (1,568-ft ²) office area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-658 RWMC office building	A 437-m ² (4,704-ft ²) office area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-660 ^c Automatic transfer switch building	Houses automatic transfer switching system for the Transuranic Storage Area Retrieval Enclosure.		Not required	Criterion 1: No hazardous or radiological material.
WMF-661 Hazardous materials storage	A 128-ft ² (12-m ²) storage area for hazardous and flammable materials.		SAR, hazard assessment, and contingency plan	Criterion 2: No hazardous material above threshold quantity.
WMF-664 Maintenance building in OU 7-10 Administrative Area (Pit 9)	A 325-m ² (3,500-ft ²) sprung structure that was used as a warehouse.		Not required	Criterion 1: No hazardous or radiological material.
WMF-665 Chemical Off-Loading Facility in OU 7-10 Administrative Area (Pit 9)	A 489-m ² (5,265-ft ²) covered pad. Covering is constructed of a metal frame and metal roof. Construction of this structure was not completed.		Not required	Criterion 1: No hazardous or radiological material.
WMF-666 Retrieval building in OU 7-10 Administrative Area (Pit 9)	A 1,795-m ² (19,320-ft ²) metal frame building covered with insulated metal panels. Construction of this building was never completed.		Not required	Criterion 1: No hazardous or radiological material.
WMF-667 Processing building in OU 7-10 Administrative Area (Pit 9)	A 7,656-m ² (82,411-ft ²) building that is a combination of reinforced concrete and metal frame construction. Construction of structure was not completed.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-668 Utility building in OU 7-10 Administrative Area (Pit 9)	A 907-m ² (9,760-ft ²) building of metal frame and panel construction. Construction of the structure is complete, but not all equipment was installed.		Not required	Criterion 1: No hazardous or radiological material.
Radiological Control Trailer in OU 7-10 Administrative Area	A 41-m ² (440-ft ²) office trailer that was used as a radiological control point for the OU 7-10 Administrative Area.		Not required	Criterion 1: No hazardous or radiological material.
Operations office in OU 7-10 Administrative Area	A 134-m ² (1,440-ft ²) modular office structure that did not contain hazardous materials.		Not required	Criterion 1: No hazardous or radiological material.
Cooling tower building in OU 7-10 Administrative Area	A 77-m ² (830-ft ²) metal frame and panel construction used for equipment storage.		Not required	Criterion 1: No hazardous or radiological material.
Vehicle maintenance shop in OU 7-10 Administrative Area	A 169-m ² (1,823-ft ²) wooden frame structure with concrete floor.		Not required	Criterion 1: No hazardous or radiological material.
Carpenter shop in OU 7-10 Administrative Area	Building is wooden frame. This structure contained the construction carpenter's shop.		Not required	Criterion 1: No hazardous or radiological material.
WMF-671 Weather Enclosure Structure	An 816-m ² (8,783-ft ²) weather enclosure structure used in the Glovebox Excavator Method Project.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-676 ^c Advanced Mixed Waste Treatment Facility	A 21,825-m ² (234,922-ft ²) facility used for characterization of transuranic waste containers and super compaction.	Category 3	SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-677 ^c Advanced Mixed Waste Treatment Project Office Complex	A 334.5-m ² (3,600-ft ²) modular prefabricated building used as office facilities for Advanced Mixed Waste Treatment Project.		Not required	Criterion 1: No hazardous or radiological material.
WMF-678 ^c Advanced Mixed Waste Treatment Project Office Complex	A 632-m ² (6,800-ft ²) modular prefabricated building used as office facilities for Advanced Mixed Waste Treatment Project.		Not required	Criterion 1: No hazardous or radiological material.
WMF-679 ^c Advanced Mixed Waste Treatment Project Workshop	A 632-m ² (1,500-ft ²) modular prefabricated building used as a general maintenance, carpentry shop.		Not required	Criterion 2: No hazardous material above threshold quantity.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-680 ^c Construction Operations Trailer	A 67-m ² (720-ft ²) construction management office trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-681 ^c Construction Operations Trailer	A 67-m ² (720-ft ²) construction management office trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-684 ^c Assembly/break building	A 334.5-m ² (3,600-ft ²) break room, eating area, and assembly area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-685 ^c Accountability building	A 14.6-m ² (157-ft ²) modular prefabricated building used as a guard house.		Not required	Criterion 1: No hazardous or radiological material.
WMF-686 ^c shower trailer	A 111.5-m ² (1,200-ft ²) personnel locker room, change room, and showers.		Not required	Criterion 1: No hazardous or radiological material.
WMF-687 ^c Break trailer—retrieval staff	A 28-m ² (300-ft ²) trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-688 ^c Break trailer	A 28-m ² (300-ft ²) trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-689 ^c Rolling Stock Maintenance Facility	A 61-m ² (660-ft ²) timber building used as a vehicle maintenance shop.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-690 ^c Carpenter shop	A 146-m ² (1,570-ft ²) timber building used as a carpentry shop.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-691 ^c Warehouse office trailer	An 82-m ² (882-ft ²) warehouse office trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-692 ^c Site warehouse	A 134-m ² (1,440-ft ²) prefabricated modular building used for general storage.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-693 ^c Consumable storage	A 139-m ² (1,495-ft ²) prefabricated modular building used for general storage.		Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-694 ^c Training facility	A 126-m ² (1,360-ft ²) prefabricated modular building containing classrooms used for training.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-696 ^c Storage facility	A 156-m ² (1,680-ft ²) prefabricated modular building used for general storage.	Category 3	Not required	Criterion 2: No hazardous material above threshold quantity.
WMF-697 Retrieval Enclosure	A 5,257-m ² (56,588-ft ²) retrieval enclosure covering the accelerated retrieval in Pit 4.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
Two propane tanks	Two 3,785-L (1,000-gal) tanks located west of WMF-697 are used for the heater and air handler for Airlock 1.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 1: No hazardous or radiological material.
Four propane tanks	Four 3,785-L (1,000-gal) propane tanks south side of WMF-697 are used for the heater and air handler for Airlock 2.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 1: No hazardous or radiological material.
WMF-699 ^c Assembly trailer restroom	An 18.6-m ² (200-ft ²) trailer containing restrooms.		Not required	Criterion 1: No hazardous or radiological material.
WMF-703 ^c Propane storage tank	A 113,562-L (30,000-gal) propane tank.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 1: No hazardous or radiological material.
WMF-708 Sump pit	A 0.9 × 0.9-m (3 × 3-ft) concrete box south of gate SA25.		Not required	Criterion 1: No hazardous or radiological material.
WMF-709 Water storage tank	A 946,353-L (250,000-gal) domestic water storage tank.		Not required	Criterion 1: No hazardous or radiological material.
WMF-711 ^c Air Support Building-II Foundation, Floor, and Airlock	This is the 2,090-m ² (22,500-ft ²) foundation, floor, and airlock of Air Support Building #2.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-714 Intermediate-Level Transuranic Storage Facility Pad 1	Storage-containing pad for intermediate-level storage of intermediate-level transuranic waste containers (radiation levels between 200 mR/hour and 4,500 R/hour) with vaults 41, 61, 76, and 122 cm (16, 24, 30, and 48 in.) in diameter.		SAR, hazard assessment, contingency plan, and RCRA	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-720 Intermediate-Level Transuranic Storage Facility Pad 2	Storage of intermediate-level (radiation levels between 200 mR/hour and 4,500 R/hour) transuranic containers with 41- and 76-cm (16- and 30-in.) diameter vaults.	Category 3	SAR, hazard assessment, contingency plan, and RCRA	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-723 ^c Transuranic Storage Area Retrieval Airlock	A 214-m ² (2,300-ft ²) airlock for the WMF-636 Transuranic Storage Area retrieval enclosure.		SAR, hazard assessment, and contingency plan	Criterion 4: Radiological materials and also may contain RCRA-regulated waste.
WMF-724 ^c Glycol Loop Enclosure	Transuranic Storage Area retrieval enclosure glycol loop, 9.3 m ² (100 ft ²).		SAR, hazard assessment, and contingency plan	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.
WMF-727 Firewater storage tank	A 946,353-L (250,000-gal) firewater storage tank.		Not required	Criterion 1: No hazardous or radiological material.
WMF-731 RWMC sewage lagoon	The lagoon consists of four separate ponds south of RWMC, and handles sanitary wastewater only.		Not required	Criterion 1: No hazardous or radiological material.
WMF-732 Propane tank	A 45,425-L (12,000-gal) propane tank providing propane to WMF-637.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 1: No hazardous or radiological material.
WMF-734 Standby Generator Enclosure	Transuranic Storage Area retrieval area standby generator enclosure containing a 500-kW generator.		Not required	Criterion 1: No hazardous or radiological material.
WMF-735 Diesel tank	Transuranic Storage Area retrieval area diesel tank.	Category 3	NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
WMF-737 Gas tank	A 1,022-L (270-gal) gasoline tank for fueling vehicles.		NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
WMF-738 Propane tank	A 1,893-L (500-gal) propane tank to fuel the pump in WMF-603.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 1: No hazardous or radiological material.
WMF-750 Temporary fire riser building	A 5.9-m ² (64-ft ²) building south of WMF-657 used for the Glovebox Excavator Method Project.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-752 ^c Propane storage tank	A 170,344-L (45,000-gal) propane tank to support the Advanced Mixed Waste Treatment Facility and a smaller diesel feed backup generator for the WMF-634 process equipment.		NFPA 58 Liquefied Petroleum Gas Code	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.
WMF-1601 ^c Training office trailer	This is a 66.8-m ² (720-ft ²) trailer containing training administration offices.		Not required	Criterion 1: No hazardous or radiological material.
WMF-1602 ^c Break room trailer	This is a 28-m ² (300-ft ²) trailer containing a break room, eating area, and assembly area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-1603 ^c Break room trailer	This is a 28-m ² (300-ft ²) trailer containing a break room, eating area, and assembly area.		Not required	Criterion 1: No hazardous or radiological material.
WMF-1604 ^c Shift Team Lead Office Trailer	This is a 28-m ² (300-ft ²) trailer containing office facilities.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-1 Accelerated Retrieval Project Sample Support Trailer	A 156-m ² (1,680-ft ²) trailer located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-2 Accelerated Retrieval Project Operations Support Trailer	A 132-m ² (1,420-ft ²) trailer located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-3 Accelerated Retrieval Project Nondestructive Assay East Trailer	A 19.5-m ² (7 × 30-ft) trailer located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-4 Accelerated Retrieval Project Nondestructive Assay West Trailer	A 19.5-m ² (7 × 30-ft) trailer located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-6 Accelerated Retrieval Project Men's Change Trailer	A 37-m ² (400-ft ²) located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-TR-7 Accelerated Retrieval Project Women's Change Trailer	A 37-m ² (400-ft ²) located south of WMF-697.		Not required	Criterion 1: No hazardous or radiological material.
WMF-CT-1 ^c Commissioning Trailer #1	A 28-m ² (300-ft ²) commissioning trailer.		Not required	Criterion 1: No hazardous or radiological material.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
WMF-CT-2 ^c Commissioning Trailer #2	A 28-m ² (300-ft ²) commissioning trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-CT-5 ^c Commissioning Trailer #5	A 28-m ² (300-ft ²) commissioning trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-CT-7 ^c Commissioning Trailer #7	A 28-m ² (300-ft ²) commissioning trailer.		Not required	Criterion 1: No hazardous or radiological material.
WMF-CT-8 ^c Commissioning Trailer #8	A 28-m ² (300-ft ²) commissioning trailer.		Not required	Criterion 1: No hazardous or radiological material.
Diesel tanks	A 7,571-L (2,000-gal) concrete vault located at the south east corner of WMF-697.		NFPA 30 Flammable and Combustible Liquids Code	Criterion 1: No hazardous or radiological material.
North Administrative Trailer Cold Test Pit	Office space for Cold Test Pit operations.		Not required	Criterion 1: No hazardous or radiological material.
Support Trailer Cold Test Pit	Storage space for Cold Test Pit operations.		Not required	Criterion 1: No hazardous or radiological material.
South Administrative Trailer Cold Test Pit	Office space for Cold Test Pit South operations.		Not required	Criterion 1: No hazardous or radiological material.
North Yurt Cold Test Pit	Chemical and other test material storage for Cold Test Pit operations.		Not required	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.
South Yurt Cold Test Pit	Contains Pit 9 mock-up equipment and supplies.		Not required	Criterion 1: No hazardous or radiological material.
North Test Pits Cold Test Pit	Pits that contain buried simulated waste.		Not required ^c	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.
South Test Pits Cold Test Pit	Pits used to test grouting techniques and materials and contain buried simulated waste.		Not required ^c	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.

Table 2. (continued).

Facility Number and Name	Facility Description	Performance Hazard ^a Classification (earthquake)	Management Controls	Screening Criteria
Cold Test Pit North	Simulated test pits for in situ vitrification testing were created. The In Situ Vitrification Project was cancelled and the simulated test pit contents, including drums of nitrate salts and organic sludges, were not retrieved.		Not required ^c	Criterion 3: Hazardous materials above threshold quantities under appropriate management controls.
West Storage Area	The West Storage Area is outside the northwest corner of the Subsurface Disposal Area. It contains two wooden sheds, two cargo containers, four concrete vaults, and 55-gal drums.		Not required	Criterion 1: No hazardous or radiological material.

a. The RWMC area as a whole has been designated Hazard Category 2 for earthquake risk.

b. This determination is made in accordance with the RWMC Hazards Assessment (HAD-2).

c. The chemicals and simulated buried waste will be evaluated and if they are designated "waste," they will be appropriately handled under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act.

d. *Emergency Preparedness Base Plan-INEEL Emergency Plan/RCRA Contingency Plan* (PLN-114).

e. Ownership was transferred to Bechtel BWXT Idaho, LLC, for the duration of the contract period for the Advanced Mixed Waste Treatment Project. Buildings and structures will come under the management controls outlined for the Advanced Mixed Waste Treatment Project (DOE-ID 2000a).

f. Storage capacity information from the RWMC Safety Analysis Report (SAR-4).

NFPA = National Fire Protection Association

RCRA = Resource Conservation and Recovery Act

RWMC = Radioactive Waste Management Complex

SAR = safety analysis report

WMF = Waste Management Facility

4. RADIOACTIVE WASTE MANAGEMENT COMPLEX FUNCTIONAL AREAS

The RWMC was divided into the following functional areas: the TSA, the Administrative Area, the Operations Area, the SDA, the OU 7-10 Administrative Area, and outside RWMC. All functional areas are included in the analysis of the WAG 7 collocated facilities.

4.1 Transuranic Storage Area

Facilities at RWMC are under the direction of two projects: the Idaho Cleanup Project and the Advanced Mixed Waste Treatment Project. The Advanced Mixed Waste Treatment Project controls the following facilities:

- All facilities in the Transuranic Storage Area (TSA)
 - Except for Waste Management Facility (WMF) 714 and WMF-720 (in the Intermediate-Level Transuranic Storage Facility) and WMF-648 (a trailer used for monitoring the Intermediate-Level Transuranic Storage Facility vaults)
- WMF-611 and WMF-613 in the Administrative Area
- WMF-602 in the Operations Area.

The remaining facilities, including the exceptions listed for the Advanced Mixed Waste Treatment Project above, are the responsibility of the Idaho Cleanup Project.

The TSA is in the southeast portion of RWMC, adjacent to the SDA. The Advanced Mixed Waste Treatment Project has responsibility for all facilities in the TSA, except for the Intermediate-Level Transuranic Storage Facility (WMF-714 and WMF-720) and WMF-648, a trailer used for monitoring the Intermediate-Level Transuranic Storage Facility vaults. The primary purpose of the TSA is to examine, segregate, certify, and provide interim storage for solid TRU waste. The TSA is enclosed by a 2.1-m (7-ft) security fence. The following facilities were included in the analysis:

- TSA Storage Pads and Retrieval Enclosure (WMF-636)
- Intermediate-Level Transuranic Storage Facility
- WMF-628 through WMF-634 Type II Storage Modules
- WMF-635 Type I Storage Module
- WMF-610 Waste Examination Plant
- WMF-615 Stored Waste Examination Pilot Plant Drum Vent System Building
- WMF-676 Advanced Mixed Waste Treatment Facility
- WMF-618 TRU Package Transport Container-II Loading Facility
- Associated support facilities.

The three types of waste stored at the TSA are listed below:

- Retrievable contact-handled TRU waste that has TRU nuclide contamination levels greater than 100 nCi/g of alpha-emitting radionuclides and radiation levels less than 200 mR/hour at the container surface
- Retrievable remote-handled intermediate-level TRU waste with TRU nuclide contamination levels greater than 100 nCi/g and radiation levels greater than 200 mR/hour at the container surface
- Mixed low-level waste.

The TRU waste at RWMC was produced at various DOE sites, including the INL Site. The TSA facilities are described in the following subsections.

4.1.1 Transuranic Storage Area Pads

The TSA pads provide retrievable interim (i.e., 20-year) storage for contact-handled TRU waste and isolation from the environment. More than 100,000 waste containers are stored on the TSA pads with about 90% consisting of 55-gal steel drums. The remaining containers include the following:

- Steel bins that measure $1.2 \times 1.5 \times 1.8$ m ($4 \times 5 \times 6$ ft)
- Steel drums (30- and 85-gal)
- Plywood and fiberglass-reinforced plywood or modular steel boxes measuring approximately $1.2 \times 1.2 \times 2.1$ m ($4 \times 4 \times 7$ ft) or $0.6 \times 1.2 \times 2.1$ m ($2 \times 4 \times 7$ ft)
- Oversized containers.

A typical pad is composed of a 5.1 to 7.6-cm (13 to 19-in.) thick asphalt surface on a compacted gravel base. Each pad slopes laterally inward across the width of the asphalt surface with a slope of approximately 1% along the length. This shallow sloping trough is designed to prevent water accumulation on the pads. The slope also allows any runoff liquids to be sampled to determine whether radionuclides are escaping from the stored waste.

4.1.1.1 Transuranic Storage Area-1 Pad. The TSA-1 Pad was opened in October 1970 and began receiving waste on November 9, 1970. The pad was filled to capacity and then closed in 1975. The first TSA pad was 45.7 m (150 ft) wide by 121.9 m (400 ft) long and was extended to 222.5 m (730 ft) long in 1972. The pad was originally divided into 15 sections, each of which measured 12×46 m (40×150 ft). These sections were later incorporated into eight cells (Cells 1 through 8), which measured from 12 to 37 m (40 to 120 ft) long by 46 m (150 ft) wide. Each cell on the TSA-1 Pad was isolated from the adjacent cell by an earthen firewall that is 0.6 to 1.2 m (2 to 4 ft) thick.

Before December 1972, drums were stacked horizontally up to nine drums high in Cells 1, 2, 3, and 4. After December 1972, drums in Cell 5 were stacked vertically five drums high. Waste boxes were generally used to line the sides of the cell and were sometimes placed down the centerline of the cell. In 1984, approximately 2,465 drums and 240 boxes were retrieved from Cell 5 to support the TRU Waste Sampling Program

4.1.1.2 Transuranic Storage Area-2 Pad. The TSA-2 Pad was opened in September 1975, partially filled, and then closed. The TSA-2 Pad construction is similar to TSA-1 Pad and has the same overall dimensions. An air support weather shield was erected over the first storage cell in the southern portion of TSA-2 Pad in October 1975 to permit all-weather operations.

Fiberglass-reinforced plywood boxes were placed around the perimeter of each storage cell in TSA-2 Pad to add to the stacking integrity of the drums in the bin perimeter and to serve as a boundary, retaining wall, and load-bearing surface. Each cell on a pad is typically 30 × 39 m (100 × 128 ft) and is isolated from the adjacent cell by an earthen firewall that is 0.6 to 1.2 m (2 to 4 ft) thick. The steel drums occupy the space in the cell boundary and are stacked five drums high (approximately 4.6 m [15 ft] high).

After each cell was filled with waste, the air support weather shield was moved forward (i.e., north). The filled cell was then covered with fire-retardant plywood, 50-mm (0.18-in.) thick nylon-reinforced polyvinyl sheeting, and 0.6 to 0.9 m (2 to 3 ft) of soil that had been seeded with sod-building grass to provide surface drainage and prevent excessive erosion.

4.1.1.3 Transuranic Storage Area–3 Pad. The TSA-3 Pad was constructed in the early 1980s to provide an area for the certification and segregation building and Stored Waste Examination Pilot Plant facilities and associated storage areas. The certification and segregation building was dismantled and removed in Fiscal Year 1999 (Bosley and Vega 1996). Unlike the design of the previously constructed TSA-1 and -2 Pads, the TSA-3 Pad slopes laterally away from the center to prevent water accumulation under the Stored Waste Examination Pilot Plant facilities. The TSA-3 Pad consists of a 45 × 285-m (148 × 935-ft) asphalt pad that was completed in 1983 (BNFL 1999).

4.1.1.4 Transuranic Storage Area Retrieval Pad. The TSA retrieval pad is a 46 × 131-m (150 × 430-ft) asphalt pad used to store TRU waste retrieved during the Initial Drum Retrieval (McKinley and McKinney 1978) and the Early Waste Retrieval (Bishoff and Hudson 1979) Projects conducted in the SDA. The TRU waste from the Early Waste Retrieval Project is contained in U.S. Department of Transportation-7A steel bins stacked two high to form the Cell-1 boundary. The TRU waste from the Initial Drum Retrieval Project is contained in 55- and 85-gal steel drums, which were placed in metal cargo carriers and stacked two high in the Cell-1 boundary. The containers are covered with 10-cm × 30-cm × 5-m (4-in. × 12-in. × 16-ft) long planks of 0.1-cm (0.25-in.) thick plywood, polyethylene sheeting, and 0.6 to 0.9 m (2 to 3 ft) of soil that was seeded with a sod-building grass. Cells 1 and 2 contain TRU waste retrieved from Pits 11 and 12. Cell 3 is currently empty.

4.1.1.5 Transuranic Storage Area Retrieval Enclosure. The TSA retrieval enclosure (WMF-636) is a 29,171-m² (313,994-ft²) TRU waste retrieval enclosure area enclosing the TSA storage area pads and is a RCRA interim status facility. Boxes and drums are retrieved from the storage pads and stored until shipment to Type II storage interim storage before characterization and certification for shipment to WIPP. WMF-723 is the 214 m² (2,300 ft²) airlock to the TSA retrieval enclosure.

4.1.2 Intermediate-Level Transuranic Storage Facility

The Intermediate-Level Transuranic Storage Facility (WMF-714 and -720) was constructed in 1976 and is located southwest of the TSA-1 pad. The Intermediate-Level Transuranic Storage Facility was designed to provide storage for high-radiation, retrievable, remote-handled, and intermediate-level TRU waste. This TRU waste is defined as waste containing greater than 100 nCi/g of alpha-emitting TRU radionuclides per gram of waste with a container surface radiation level greater than 200 mR/hour.

The Intermediate-Level Transuranic Storage Facility area consists of storage vaults that are 0.41, 0.61, 0.76, and 1.2 m (1.3, 2.0, 2.5, and 4 ft) in diameter embedded 6.1 to 9.1 m (20 to 30 ft) into the ground on two separate asphalt pads (TSA-1 and -2 pads [WMF-714 and -720]). The vaults are embedded in a compacted 27 × 107-m (88 × 352-ft) earthen berm. The berm is approximately 1.5 m (5 ft) above grade and is sloped to prevent flooding around the vault covers. The top of the berm is covered with asphalt. The vaults are constructed of carbon steel pipe and are watertight and grouted in concrete. A removable concrete shielding plug is provided for each vault. The Intermediate-Level Transuranic

Storage Facility vaults are designed to store TRU waste with radiation levels of between 0.2 and 4,500 R/hour at the container surface. An asphalt road permits heavy equipment to be used during waste unloading and retrieval operations. The vaults with diameters of 0.61, 0.76, and 1.2 m (2, 2.5, and 4 ft) are designed to accommodate free-air transfers of waste having radiation levels up to 30 R/hour and shielded transfers of waste with higher levels. The vaults with diameters of 0.41 m (1.3 ft) match the diameter of the bottom-discharge of the Hot Fuel Examination Facility-5 shipping cask to allow shielded transfers of waste with a surface radiation level up to 4,500 R/hour. Monitoring and sampling provisions are included in the vault designs. Radiation levels above filled vaults are maintained at less than 1 mR/hour at 0.91 m (3 ft) above the surface. Personnel exposures are minimized by ensuring short exposure times for the various transfers, maintaining an appropriate distance from the waste containers, and through placement of appropriate shielding.

Each vault has a straight-pipe storage section and larger lead-in pipe section. The larger diameter lead-in pipe contains the shield plug and is capped at the top by a bolted blind flange. The vaults are vented by a capped environmental monitoring tube. The vault plug is made from reinforced concrete and has a diameter slightly smaller than the upper section of the steel vault. The vault caps are hermetically sealed using a neoprene gasket. The depths of the vaults vary from approximately 6 to 9 m (20 to 30 ft) to accommodate irregular subsurface basalt formations.

The vaults are installed on 2.4-m (8-ft) centers in columns and on minimum 1.8-m (6-ft) centers in rows. Pad 1 measures 9.1×107 m (30×351 ft). Pad 2 measures 31×107 m (102×351 ft). Each pad is configured with rows of vaults installed symmetrically along both sides of a central heavy-equipment lane that provides access for heavy equipment during operations.

WMF-648 is a 20-m^2 (215-ft^2) trailer located in the Intermediate-Level Transuranic Storage Facility and is used in monitoring the vaults.

4.1.3 WMF-628 through -634 Type II Storage Modules 1 through 7

The WMF-628 through -634 Type II storage modules numbers 1 through 7 measure approximately 37×73 m (120×240 ft) and are constructed of steel framing attached to a curbed concrete slab with walls of ribbed-metal siding. The roofs are constructed of standing seam metal. The storage modules have drive-through access for delivery of waste drums and boxes by trailer or forklift. The storage modules provide an area in which TRU waste containers are stored on an interim basis after retrieval, between characterization steps, and before assembly for shipment to WIPP.

Type II storage module No. 7 (WMF-634) is used for waste storage, real-time radiography, nondestructive assay, drum venting, visual examination verification, headspace gas sampling, and drum coring. Characterization of boxes and sludge and debris drums will be performed in WMF-634. Characterization of sludge and debris drums is also performed in Type II storage module No. 1 (WMF-628). Characterization in WMF-628 will consist of real-time radiography, nondestructive assay, and headspace gas sampling.

4.1.4 WMF-635 Type I Storage Module

The WMF-635 Type I storage module measures approximately 49×78 m (160×255 ft) and is a heated building constructed of steel framing attached to a curbed concrete slab with walls of ribbed metal siding and a roof of standing seam metal. This storage module is used for drum venting and headspace gas sampling to meet WIPP transportation and disposal criteria, and for payload assembly before TRU Package Transport Container-II loading. There are six puck drums (i.e., a clean, 100-gal drum containing compacted waste drums [or pucks]) per payload assembly, nine sludge drums per 10-drum overpack, and

12 to 14 debris drums per payload assembly for drums that meet WIPP container integrity requirements. The 55-gal drums that do not meet container integrity requirements go into a 10-drum overpack.

One portion of the building holds containerized waste before transport to WMF-618. A second area provides a sheltered area for drum aspiration after venting. The third area contains the Drum Vent System Building (WMF-615), which provides drum conveying systems, a venting silo, filter insertion equipment, and a drum palletizer. The building has drive-through access for delivery of drums.

4.1.5 WMF-610 Waste Examination Building

WMF-610 is a preengineered metal structure measuring approximately 18×49 m (60×160 ft) that is located adjacent and parallel to the other TSA pads. The building interior is column-free. The surfaces of areas of the building where waste is routinely handled are painted to permit easy decontamination.

Characterization of sludge and debris drums is performed in WMF-610. Characterization consists of real-time radiography and nondestructive assay. Drums examined successfully in WMF-610 need additional characterization, such as drum venting and coring for sludge drums, which is performed in WMF-634.

4.1.6 WMF-615 Stored Waste Examination Pilot Project Drum Venting System Building

The Drum Venting System Building (WMF-615) is an internal structure within WMF-635 (Type I Storage Module) and is composed of a cylindrical, preengineered galvanized steel silo enclosed within a 9.1×12.2 -m (30×40 -ft) rectangular, preengineered metal building. The silo provides the primary containment enclosure for drum venting and filter insertion operations, while the outer building (i.e., WMF-635) provides an area for drum headspace gas sampling, the entrance and exit conveyers, ventilation equipment, and a drum survey station. An electrically operated roll-up door on the north side of the outer building provides access for incoming drums. Two opposing doors on the silo allow drums to be conveyed through the silo. Another electrically operated roll-up door on the south side of the building is used as the exit point for the drums. The drum survey station, located between the silo and the Drum Vent System Building exit doors, provides a glovebox-type access for obtaining contamination smears from outgoing vented drums, performing composite carbon filter replacements, and obtaining drum head-space gas samples.

A control room for the system operator and radiological control technician, located at the southwest corner of the outer building (i.e., WMF-635), contains the control mechanisms for the drum vent system and ventilation system. A blast-resistant window measuring $0.61 \text{ m} \times 0.61 \text{ m} \times 25.4 \text{ mm}$ ($2 \text{ ft} \times 2 \text{ ft} \times 1 \text{ in.}$) is located on the west side of the silo to allow the operator to observe, control, and monitor operations. A radiological control technician is stationed at the drum survey access area, located in the control room, and obtains contamination smear surveys for each outgoing vented drum. No personnel are permitted inside the silo while venting and filter insertion operations are in progress.

The concrete slab base of the Drum Vent System Building has a 5.1-cm (13-in.) upward-sloped outer edge along the perimeter to retain water should it leak into the building. The only potential sources of water leakage into the building would be from environmental sources (e.g., rainwater, snow melt, and area flooding) because the shelter contains no domestic water. However, water entering the building in such a manner is not expected to cause contamination spread because the facility is maintained radiologically clean.

The venting silo is designed to dissipate the energy released during a maximum credible explosion of a single waste drum by an upward movement of the entire roof assembly. Design calculations demonstrate that the silo side panels, the Lexan viewing window, the access doors, and the roof assembly are sufficient to contain the pressure pulse generated during a maximum credible explosion. The silo also is qualified to Uniform Building Code (Zone 3) seismic loading criteria (ICBO 1997). No combustible materials were used in the construction of the silo because of the potential for flammable or explosive reactions of hydrogen and oxygen involving TRU waste drums. In addition, all exposed surfaces were coated with a high-gloss, epoxy-based paint that is easy to decontaminate.

The silo is equipped with two independent ventilation systems to dissipate concentrations of hydrogen to below the lower explosive limit during drum venting operations. These systems include (1) a recirculation system to rapidly dilute any hydrogen expelled during the drum vent system vent cycle to lower than the flammable concentration limits, and (2) an off-gas system to exhaust any vented hydrogen from the silo. Installed sensors instigate an alarm on a loss of negative pressure. They also provide an alarm and prevent the initiation of the punch cycle when a loss of ventilation flow occurs.

4.1.7 WMF-676 Advanced Mixed Waste Treatment Facility

The Advanced Mixed Waste Treatment Facility is a 21,825-m² (234,922-ft²) building used for characterization of TRU containers, transfer of waste from boxes into drums, and super compaction of drums to reduce shipping volume.

Boxes containing waste arriving from interim storage are dumped and loaded into clean 55-gal drums. The drums are assayed and sent for super compaction. Characterized waste drums from WMF-634 are fed directly into super compaction. A compacted drum is called a “puck.” The pucks are then loaded into clean 100-gal drums. Each clean 100-gal drum will fit either three pucks (compacted from 55-gal lined drums) or five pucks (compacted from 55-gal unlined drums). The 100-gal drums loaded with pucks are then assayed and transferred to interim storage before being sent to WMF-635 for payload assembly.

4.1.8 WMF-618 Transuranic Package Transport Container-II Loading Facility

The TRU Package Transport Container-II loading facility is a preengineered metal building (24 × 15 × 8.5 m [80 × 50 × 30 ft]) that is used for loading TRU Package Transport Container-II containers.

Payload assemblies are received from WMF-635 and loaded into TRU Package Transport Container-II shipping casks. There are two payload assemblies per each TRU Package Transport Container-II container. A balancing unit is attached to the array and the assembly is balanced and then lowered into one of three TRU Package Transport Container-II casks, which are mounted on a transport trailer using four tie downs per cask. The loaded casks are then leak-tested before transport to WIPP.

4.1.9 Support Facilities

4.1.9.1 Railroad Apron. An outdoor railroad loading area (i.e., apron) was provided in the TSA for loading and unloading railroad cars. This apron could support existing mobile cranes during loading and unloading operations. When deliveries come by rail, the full cars were delivered to the gate by railroad personnel. These cars were then moved into the TSA for unloading using a rail mover. This area has not been used, maintained, or inspected over the last several years and hence is currently not operational.

4.1.9.2 WMF-614 Propane Vaporizer Housing. The WMF-614 propane vaporizer housing is a commercial 3.6×2.4 -m (12×8 -ft) metal-gabled shelter (i.e., storage shed) used to contain the vaporizers for the Stored Waste Examination Pilot Plant propane system. Propane is supplied to the vaporizers from the propane storage tank (WMF-703).

4.1.9.3 WMF-617 Stored Waste Examination Pilot Project Maintenance Facility. The WMF-617 Stored Waste Examination Pilot Plant maintenance and support building, designed to provide support to the maintenance organization, is a preengineered metal building on a concrete pad. The building contains offices for maintenance personnel, a small maintenance work area, and a tool crib.

4.1.9.4 WMF-624 Fire Riser Enclosure. WMF-624 is a 6-m^2 (64-ft^2) single story, steel framed, prefabricated modular building with metal walls and roof that houses the firewater system riser. It is normally unoccupied.

4.1.9.5 WMF-660 Automatic Transfer Switch Building. WMF-660 is a 9.8-m^2 (106-ft^2) facility with masonry exterior walls that houses the automatic transfer switching system for the TSA.

4.1.9.6 WMF-711 Air Support Building-II Foundation, Floor, and Airlock. WMF-711 is the $2,090\text{-m}^2$ ($22,500\text{-ft}^2$) foundation, floor and airlock of Air Support Building II. WMF-711 was a fabric liner supported by positive pressure generated from a large air blower. The utilities were isolated and the fabric was removed. WMF-711 was used as a radioactive material storage area.

4.1.9.7 Glycol Loop Enclosure. WMF-724 is the 9.3-m^2 (100-ft^2) TSA retrieval enclosure glycol loop enclosure within the Advanced Mixed Waste Treatment Facility.

4.1.9.8 Maintenance and Storage Facilities

Table 3 lists the TSA maintenance and storage facilities.

Table 3. Transuranic Storage Area maintenance and storage facilities.

WMF-679 Advanced Mixed Waste Treatment Project Workshop	WMF-679 is a 139-m^2 ($1,500\text{-ft}^2$) prefabricated modular building containing workshop facilities for maintenance staff.
WMF-689 Rolling Stock Maintenance Facility	WMF-689 is a 61-m^2 (660-ft^2) building used for vehicle maintenance.
WMF-690 Carpenter shop	WMF-690 is a 146-m^2 ($1,570\text{-ft}^2$) carpentry shop.
WMF-692 Site warehouse	WMF-692 is a 134-m^2 ($1,440\text{-ft}^2$) prefabricated modular site warehouse and general storage building.
WMF-693 Consumable storage	WMF-693 is a 139-m^2 ($1,495\text{-ft}^2$) prefabricated modular building used for general storage.
WMF-696 Storage facility	WMF-696 is a 156-m^2 ($1,680\text{-ft}^2$) prefabricated modular building used for general storage.

4.1.9.9 Office and Classroom Buildings

Table 4 lists buildings used for offices and training.

Table 4. Transuranic Storage Area office and classroom buildings.

WMF-677 Advanced Mixed Waste Treatment Project Office Complex	WMF-677 is a 334-m ² (3,600-ft ²) prefabricated modular building containing office facilities.
WMF-678 Advanced Mixed Waste Treatment Project Office Complex	WMF-678 is a 632-m ² (6,800-ft ²) prefabricated modular building containing office facilities.
WMF-684 Assembly/break building	WMF-684 is a 334-m ² (3,600-ft ²) prefabricated modular building containing a break room, eating area, and assembly area.
WMF-694 Training facility	WMF-694 is a 126-m ² (1,360-ft ²) prefabricated modular building used as a training facility.

4.1.9.10 Standby Generator, Propane, and Fuel Tanks

Table 5 lists the fuel tanks, diesel and propane, and the standby generator enclosure in the TSA.

Table 5. Transuranic Storage Area standby generator enclosure, propane, and fuel tanks.

WMF-627 Propane pump enclosure	A 13.3-m ² (143-ft ²) propane pump enclosure.
WMF-703 Propane storage tank	A 113,562-L (30,000-gal) propane tank, north side of the Transuranic Storage Area.
WMF-734 Standby Generator Enclosure	Transuranic Storage Area standby generator, (500 KW) enclosure.
WMF-735 Diesel tank	A 7,571-L (2,000-gal) diesel tank.
WMF-751 Advanced Mixed Waste Treatment Project Fueling Station	Two tanks, 7,571-L (2,000-gal) total, located along the south fence of the Transuranic Storage Area.
WMF-752 Propane storage tank	A 170,344-L (45,000-gal) propane tank supports the Advanced Mixed Waste Treatment Facility and a smaller diesel feed backup generator for the WMF-634 process equipment.

4.1.9.11 Office and Break Trailers

Table 6 lists the trailers used for office facilities and other personnel support at the TSA.

Table 6. Support trailers in the Transuranic Storage Area.

WMF-1601 Training office trailer	A 65-m ² (700-ft ²) trailer with training administration offices.
WMF-1602 Break room trailer	A 28-m ² (300-ft ²) break room, eating area, and assembly area.
WMF-1603 Break room trailer	A 28-m ² (300-ft ²) break room, eating area, and assembly area.
WMF-1604 Shift Team Lead Office Trailer	A 28-m ² (300-ft ²) office facility for supervisors.
WMF-686 Advanced Mixed Waste Treatment Facility Shower Trailer	An 11.5-m ² (1,200-ft ²) personnel locker room, change area, and showers.

Table 6. (continued).

WMF-687 Break trailer—retrieval staff	28-m ² (300-ft ²).
WMF-688 Break trailer	28-m ² (300-ft ²).
WMF-691 Warehouse office trailer	An 82-m ² (882-ft ²) office trailer.
WMF-699 Assembly trailer restroom	An 18.6-m ² (200-ft ²) restroom facility.
WMF-CT-1	A 28-m ² (300-ft ²) commissioning trailer.
WMF-CT-2	A 28-m ² (300-ft ²) commissioning trailer.
WMF-CT-5	A 28-m ² (300-ft ²) commissioning trailer.
WMF-CT-7	A 28-m ² (300-ft ²) commissioning trailer.
WMF-CT-8	A 28-m ² (300-ft ²) commissioning trailer.

4.2 Administrative Area

The RWMC Administrative Area contains the following offices, communications and alarm building, and other support-related facilities (see Figure 2):

- Radiological control field office (WMF-601)
- Office building and operational support facility (WMF-613)
- Communications building and dial room (WMF-619)
- Office annex (WMF-622)
- Operations control building and security office (WMF-637)
- Office annex No. 2 trailer (WMF-653)
- RWMC office building (WMF-658).
- Propane tank WMF-732.

4.2.1 WMF-611 Operations Office Building

The WMF-611 operations office building is a 6.1 × 6.1-m (20 × 20-ft) prefabricated metal building anchored to a concrete pad with partition walls of wood frame and gypsum board construction. This building is controlled by the Advanced Mixed Waste Treatment Project.

4.2.2 WMF-613 Office Building and Operational Support Facility

The WMF-613 is a 687-m² (7,399-ft²) single story, steel-framed, prefabricated modular, metal sided and roofed office building and operational support facility that contains office space and conference rooms. This building is controlled by the Advanced Mixed Waste Treatment Project.

4.2.3 WMF-619 Communications Building and Dial Room

The WMF-619 communications building and dial room is an 88-m² (945-ft²) single story, steel-framed, metal structure on top of a concrete pad. It contains telephone switchgear and electrical alarm equipment.

4.2.4 WMF-622 Office Annex

The WMF-622 office annex is a doublewide 8.4×11.7 -m (28×38 -ft) trailer annexed to WMF-613. The building is partitioned into office spaces.

4.2.5 WMF-637 Operations Control Building and Security Office

The WMF-637 Operations Control Building and security office is located on the southeastern side of the Administrative Area. The Operations Control Building is a $2,239\text{-m}^2$ ($24,100\text{-ft}^2$) one-story, prefabricated steel, modular building situated on a concrete pad. The building walls are constructed of steel siding secured to a steel frame. The building has fire alarm and firewater systems. The building is the point of access and egress to RWMC. The RWMC barrier gate is included as a part of the Operations Control Building. The barrier gate, which is controlled from the Operations Control Building, is mounted on a concrete pad and controls vehicular access and egress.

4.2.6 WMF-653 Office Annex No. 2 Trailer

The WMF-653 Office Annex No. 2 is an 8.4×11.7 -m (28×38 -ft) doublewide trailer used for portable office space.

4.2.7 WMF-658 Radioactive Waste Management Complex Office Building

The 424-m^2 ($4,560\text{-ft}^2$) WMF-658 RWMC office building provides office space for RWMC personnel.

4.2.8 WMF-732 Propane Tank

WMF-732 is a 45,425-L (12,000-gal) propane tank located adjacent to the RWMC private vehicle parking lot. The tank provides propane to two boilers and a water heater in WMF-637.

4.3 Operations Area

The RWMC Operations Area contains the following facilities (see Figure 2):

- Radiological control field office (WMF-601)
- RWMC Highbay (WMF-602)
- RWMC Pumphouse (WMF-603)
- Change room and lunchroom building (WMF-604)
- Heavy equipment storage building (WMF-609)
- RCRA 90-Day Storage Area (WMF-609A and WMF-609B)
- Work control center facility (operations) (WMF-620)
- Work control support facility (WMF-621)
- Firewater Pumphouse No. 2 (WMF-639)
- Material handling facility (WMF-655)
- Maintenance facility (WMF-656)

- Hazardous Material Storage (WMF-661)
- Water storage tank (WMF-709)
- Firewater storage tank (WMF-727)
- Temporary Fire Riser Building (WMF-750)
- Support trailers (WMF-645, WMF-646, WMF-657).

4.3.1 WMF-601 Radiological Control Field Office

The WMF-601 radiological control field office is a one-story (12×24 -m [40×80 -ft]), prefabricated, freestanding metal structure. The building contains offices, rest rooms, change rooms and lockers, and a radiation control laboratory. The laboratory contains a gamma spectrometer, an alpha spectrometer, smear-counting scalers, an automated scaler, and a laboratory hood equipped with a high-efficiency particulate air filter. The laboratory may contain small quantities of radioactive material in the form of smear samples, constant air monitor filter samples, other samples, and check-sources. Personnel are exposed to general radiation levels that are less than 0.1 mR/hour.

4.3.2 WMF-602 Radioactive Waste Management Complex Highbay

The WMF-602 RWMC Highbay is a prefabricated metal structure on a concrete pad. WMF-602 is a multipurpose operational support building that provides room for storing materials and an equipment laboratory. The building is approximately $9.8 \times 22.5 \times 6.1$ m ($32 \times 74 \times 20$ ft) high and is large enough to park inside a trailer containing a 55-ton cask or a TRU Package Transport Container-II cask. The floor of the building was sealed with epoxy paint and the walls were painted with a Carboline coating to facilitate periodic decontamination of the building. In 1981, the building was decontaminated and modified for its present use as a storage facility. A water filling station is attached to the south side of the building for filling water trucks and tankers. The building has stored small quantities of hazardous materials in a temporary accumulation area. This building is controlled by the Advanced Mixed Waste Treatment Project.

4.3.3 WMF-603 Radioactive Waste Management Complex Pumphouse

The WMF-603 RWMC Pumphouse is a 129-m^2 ($1,387\text{-ft}^2$) single-story, steel-frame metal structure on a concrete pad. The pumphouse contains the potable water supply pump and an auxiliary electric fire pump for RWMC and the associated piping systems. Included in the building are a deep-well pump, two domestic pumps, an emergency propane generator, and one electric water pump. The propane tank (WMF-738) for the generator is located approximately 6.1 m (20 ft) southeast of WMF-603.

4.3.4 WMF-604 Change Room and Lunchroom Building

The WMF-604 change room and lunchroom building is a 9.75×12 -m (32×40 -ft) prefabricated steel-frame metal structure on top of a concrete pad. The building provides a lunchroom, change areas, a rest room, and showers for operations personnel.

4.3.5 WMF-609 Heavy Equipment Storage Building

The WMF-609 heavy equipment storage building is an 11-bay, 1,037-m² (11,166-ft²) metal structure enclosed only on three sides, except for two south bays that are totally enclosed and serve as a repair shop and storage area. The repair shop is used for maintenance of the heavy equipment used at RWMC. The remaining enclosed area is used primarily for storage of heavy equipment. Current chemical inventory includes lubricants, oils, resins, grease, and solvents.

4.3.6 WMF-609A and WMF-609B Resource Conservation and Recovery Act 90-Day Storage Area

WMF-609A and WMF-609B RCRA 90-Day Storage Area is a 7.6 m (25-ft) metal storage building north of WMF-609. WMF-609A is a temporary accumulation area and is currently empty. WMF-609B is a CERCLA Storage Area that contains six drums (i.e., four 55-gal drums, one 10-gal drum, and one 5-gal drum) containing CERCLA waste.

4.3.7 WMF-620 Work Control Center Facility

The WMF-620 Work Control Center operations facility is a doublewide (8.4 × 16.9-m [28 × 55-ft]) trailer that contains hard-walled offices, several cubicles, the RWMC shift supervisor's desk, and rest rooms. WMF-620 is the central work control point for RWMC operations. Work authorizations are processed in WMF-620.

4.3.8 WMF-621 Work Control Center Support Facility

The WMF-621 work control center support facility for operations is a doublewide (8.4 × 16.9-m [28 × 55-ft]) trailer annexed to the WMF-620 work control center facility. The building is divided into office spaces with movable partitions and is used by various RWMC operations support personnel.

4.3.9 WMF-639 Firewater Pumphouse No. 2

Firewater Pumphouse No. 2 (WMF-639) is a 166-m² (1,787-ft²) building used for pumping firewater. It has an electric firewater pump and backup firewater diesel pump with a 1,136-L (300-gal) diesel tank in the northeast corner of the building. The diesel tank is surrounded by a concrete basin secondary containment.

4.3.10 WMF-655 Material Handling Facility

The WMF-655 material handling facility is a 509-m² (5,483-ft²) prefabricated metal building with metal doors that is used as a warehouse to house inventory such as oils, batteries, and other hazardous materials routinely accepted in industrial facilities.

4.3.11 WMF-656 Maintenance Facility

The WMF-656 maintenance facility is a 465-m² (5,005-ft²) prefabricated modular metal building that supports maintenance activities. Chemical inventory includes oils, grease, antifreeze, and other hazardous materials routinely accepted in industrial facilities. It also contains a break and lunch room.

4.3.12 WMF-661 Hazardous Material Storage

WMF-661 is a steel framed 12-m² (128-ft²) building situated on a concrete pad. WMF-661 provides controlled storage for hazardous and flammable material. WMF-661 also includes a centralized satellite accumulation area for hazardous waste generated during maintenance activities performed at the facility, such as expired paint. The building contains motor oil, antifreeze, grease, paint, carpet tile adhesive, and primer.

4.3.13 WMF-709 Water Storage Tank

The 946,353-L (250,000-gal) WMF-709 water storage tank, used for storing domestic water, is constructed of 4-cm (1.6-in.) thick welded steel plates. The water level in the tank is measured by an ultrasonic tank-level indicator that requires a 110-V source, which is supplied from the WMF-603 RWMC Pumphouse. The deep-well pump, located in WMF-603, is used to fill the water tank.

4.3.14 WMF-727 Firewater Storage Tank

The 946,353-L (250,000-gal) WMF-727 firewater storage tank is constructed of 4-cm (1.6-in.) welded steel plates. The level in the tank is measured by an ultrasonic tank level indicator that requires a 110-V source, which is supplied from the WMF-639 Firewater Pumphouse No. 2. Although the tank is insulated to prevent the water from freezing, a circulation pump and heater circulate and heat the water during the winter months. The tank is filled by potable water pumps (in the WMF-603 RWMC Pumphouse) from the water storage tank (WMF-709).

4.3.15 WMF-750 Temporary Fire Riser Building

WMF-750 is a 6-m² (64-ft²) building located south of WMF-657 and was used in the Glovebox Excavator Method Project. WMF-750 is a structure with a concrete floor that houses risers and control valves, dry sprinkler systems, deluge monitor nozzles, and the standpipe system.

4.3.16 Support Trailers

Table 7 lists the field support trailers in the Operations Area.

Table 7. Operations Area support trailers.

WMF-645 Construction support trailer	WMF-645 construction support trailer is a 144-m ² (1,549-ft ²) single story trailer used for office space.
WMF-646 Field support trailer	WMF-646 field support trailer is a 144-m ² (1,549-ft ²) single story trailer used for office space.
WMF-657 Field support trailer	The WMF-657 field support trailer is a 146-m ² (1,568-ft ²) trailer used to house facility field support personnel.

4.4 Subsurface Disposal Area

The SDA is a 97-acre (39-ha) area used for the disposal of low-level waste and TRU waste in pits and trenches. The SDA contains the following facilities:

- Vapor Vacuum Extraction Monitoring Well Sheds (WMF-641, WMF-643)
- Weather Enclosure Structure (WMF-671)

- Retrieval Enclosure (WMF-697)
- Propane Tanks
- Remote-handled Low-Level Waste Concrete Lined Vaults (WMF-730)
- Accelerated Retrieval Project Support Trailers (WMF-TR-1, 2, 3, 4, 6, 7).

4.4.1 Vapor Vacuum Extraction Monitoring Well Sheds

Table 8 lists the vapor vacuum extraction monitoring well sheds in the SDA.

Table 8. Vapor vacuum extraction monitoring well sheds.

WMF 641 Vapor Vacuum Extraction Monitoring Well D02	WMF-641 is a 1.5-m ² (16-ft ²) monitoring well shed located east of Pad A in the west section of Pit 5.
WMF-643 Vapor Vacuum Extraction Monitoring Well 89-02D	WMF-643 is a 1.5-m ² (16-ft ²) monitoring well shed located south of WMF-697 and west of organic contamination in the vadose zone Unit E.

4.4.2 WMF-671 Weather Enclosure Structure

WMF-671 is the 816-m² (8,783-ft²) weather enclosure structure that was used during the Glovebox Excavator Method Project. WMF-671 is a polyvinyl chloride-coated polyester cover stretched over a prefabricated frame that is tied to concrete anchors. Waste zone materials within the glovebox system and retrieval enclosure were removed and only residual contamination remains. It was placed in operational stand-by on 10/01/04 and is being reviewed for possible reuse or demolition. This structure is located in Pit 9.

4.4.3 WMF-697 Retrieval Enclosure

WMF-697 is a 5,266-m² (56,686-ft²) temporary, removable retrieval and storage enclosure and airlock constructed to cover the retrieval area in Pit 4 during retrieval actions to provide protection from the weather and limit the spread of possible contamination. This facility houses excavation, sampling, packaging, package decontamination equipment, and personnel and equipment ingress and egress.

4.4.4 Propane Tanks

Two 3,785-L (1,000-gal) tanks are located west of WMF-697 and are used for the heater and the air handler for Airlock 1. Four 3,785-L (1,000-gal) propane tanks are located on the south side of WMF-697 and are used for the heater and the air handler for Airlock 2

4.4.5 WMF-730 Remote-Handled Low-Level Waste Concrete-Lined Disposal Vaults

WMF-730 consists of especially designed cylindrical engineered concrete vaults used for disposal of most of the remote-handled low-level waste. The engineered vaults are covered by thick concrete shielding plugs. Two hundred vaults were constructed in the southwest corner of Pit 20 and approximately one third have been filled.

4.4.6 Accelerated Retrieval Project Support Trailers

Table 9 lists the Accelerated Retrieval Project support trailers located south of WMF-697.

Table 9. Accelerated Retrieval Project support trailers.

WMF-TR-1	Accelerated Retrieval Project Sample Support Trailer	A 156-m ² (1,680-ft ²) trailer.
WMF-TR-2	Accelerated Retrieval Project Operations Support Trailer	A 132-m ² (1,420-ft ²) trailer.
WMF-TR-3	Accelerated Retrieval Project Nondestructive Assay East Trailer	A 19.5-m ² (210-ft ²) trailer.
WMF-TR-4	Accelerated Retrieval Project Nondestructive Assay West Trailer	A 19.5-m ² (210-ft ²) trailer.
WMF-TR-6	Accelerated Retrieval Project Men's Change Trailer	A 37-m ² (400-ft ²) trailer.
WMF-TR-7	Accelerated Retrieval Project Women's Change Trailer	A 37-m ² (400-ft ²) trailer.

4.5 OU 7-10 Administrative Area

The area known as the OU 7-10 Administrative Area is controlled as an inactive construction site. Currently existing facilities constructed under the DOE contract with Lockheed Martin Advanced Environmental Systems are described in Table 10. None of the facilities were put into operational status. All hazardous materials (Superfund Amendment and Reauthorization Act [42 USC § 9601 et seq.]) have been removed.

Table 10. Currently existing facilities constructed under the U.S. Department of Energy contract with Lockheed Martin Advanced Environmental Systems.

OU 7-10 Administrative Area Building Number	INL Building Number	Size (ft ²)	OU 7-10 Administrative Area Facility Name	Description	Completed?
L-300	WMF-668	9,760	Utility building	Building is metal frame and panel construction. Construction of structure is complete, but not all equipment has been installed. This building is not known to contain hazardous materials.	Yes
L-500	WMF-667	82,411	Treatment building	Building is a combination of reinforced concrete and metal frame construction. Construction of structure was not completed and it is not known to contain hazardous materials.	No
L-600	WMF-666	19,320	Retrieval building	Building is a metal frame covered with insulated metal panels. Construction of this building was never completed and it contains no hazardous materials. It was constructed on top of the north end of Operable Unit 7-10.	No

Table 10. (continued).

OU 7-10 Administrative Area Building Number	INL Building Number	Size (ft ²)	OU 7-10 Administrative Area Facility Name	Description	Completed?
L-913	WMF-665	5,265	Chemical Off-Loading Facility	Structure is a covered pad. Covering is constructed of a metal frame and metal roof. Construction of this structure was not completed, and it contains no hazardous materials.	No
L-915	WMF-664	3,500	Warehouse	Building is a sprung structure that is insulated and heated, and is constructed of insulated fabric panels supported by a metal frame. This building was used as a warehouse and it is not known to contain hazardous materials.	Yes
No record of building number available	No record of building number available	1,440	Operations office	Building is a modular office structure. This building did not contain any hazardous materials.	Yes
No record of building number available	No record of building number available	440	Radiological Control Trailer	Building is an office trailer that was used as a Radiological Control point for OU 7-10 Administrative Area construction activities. While in operation, this trailer contained radioactive sources that have been removed from the site. The trailer is not currently known to contain contamination or hazardous materials.	Yes
No record of building number available	No record of building number available	830	Cooling tower building	Building is metal frame and panel construction. It contains some switchgear. The floor is concrete. The building has been used only for equipment storage.	Yes
No record of building number available	No record of building number available	1,823	Vehicle maintenance shop	Building is a wooden frame structure with concrete floor. This structure was used to service construction vehicles used by OU 7-10 Administrative Area. While in operation it contained oils and lubricants. The structure is presently used to store miscellaneous materials. This building is not known to contain hazardous materials.	Yes

Table 10. (continued).

OU 7-10 Administrative Area Building Number	INL Building Number	Size (ft ²)	OU 7-10 Administrative Area Facility Name	Description	Completed?
No record of building number available	No record of building number available	512	Carpenter shop	Building is wooden frame. This structure contained the construction carpenter's shop. It presently contains equipment stored at the site. This building is not known to contain hazardous materials.	Yes

INL = Idaho National Laboratory

4.6 Facilities Outside the Radioactive Waste Management Complex

Facilities are located outside but in the immediate vicinity of RWMC. These include the Cold Test Pits, Engineered Barrier Test Facility monitoring wells, and assorted storage locations (facilities associated with the Cold Test Pit and the Engineered Barrier Test Facility will be discussed in Section 5):

- Construction Operations Trailers (WMF-680, WMF-681)
- U.S. Geological Survey Monitoring Wells WMF-605 and WMF-606
- WMF-685 Accountability Building
- WMF-731 RWMC Sewage Lagoon
- West Storage Area.

4.6.1 WMF-680 and WMF-681 Construction Operations Trailers

WMF-680 and WMF-681 are 67-m² (720-ft²) trailers located north of the OU 7-10 Administrative Area that are used for construction management offices.

4.6.2 U.S. Geological Survey Monitoring Wells

Table 11 lists the U.S. Geological Survey monitoring wells in the immediate vicinity of RWMC.

Table 11. U.S. Geological Survey monitoring wells.

WMF-605 Well House 87	WMF-605 is the well house for U.S. Geological Survey monitoring Well 87, a 3-m ² (33-ft ²) white shed.
WMF-606 Well House 88	WMF-606 is the well house for U.S. Geological Survey monitoring Well #88 white shed located south of the Cold Test Pit.

4.6.3 WMF-685 Accountability Building

WMF-685 is a 14.6-m² (157-ft²) guard station building used for monitoring personnel entering or leaving the Advanced Mixed Waste Treatment Project, located in the south fence of the TSA at Gate SA23.

4.6.4 WMF-731 Radioactive Waste Management Complex Sewage Lagoon

The RWMC sewage lagoon is south of RWMC. The lagoon consists of four separate ponds and handles sanitary wastewater only. The ponds are lined with impermeable plastic membranes or soil liners to prevent seepage into subsurface soils or the groundwater.

4.6.5 West Storage Area

The West Storage Area is a fenced area northwest of the SDA that contains two wooden sheds, two cargo containers (i.e., RSU# 342 containing lifting devices for crane and forklift, and RSU# 343 containing wooden pallets and boxes), four concrete vaults, empty 55-gal drums, and twenty 5-gal buckets containing corrosion test soil.

5. RADIOACTIVE WASTE MANAGEMENT COMPLEX PROJECTS

Projects that are being conducted at RWMC are described in the following subsections.

5.1 Organic Contamination in the Vadose Zone

Operable Unit 7-08 is the designation recognized under the Federal Facility Agreement and Consent Order (DOE-ID 1991a) for remediation of organic contamination in the vadose zone in WAG 7. Remediation options for organic contamination in the vadose zone were identified by Duncan, Troutman, and Sondrup (1993), which eventually led to the record of decision for the organic contamination in the vadose zone (DOE-ID 1994a). Operable Unit 7-08 deals specifically with the organic contamination in the vadose zone from land surface to the top of the Snake River Plain Aquifer, approximately 177 m (580 ft) below land surface, located in the SDA outside the disposal pits and trenches. The vadose zone contains volatile organic compounds primarily in the form of organic vapors that have migrated from the buried waste in the pits.

The selected remedy, as identified in the OU 7-08 Record of Decision (DOE-ID 1994a), was extraction and destruction of organic contaminant vapors in the vadose zone accompanied by monitoring in the vadose zone and in the underlying aquifer. The general objective of the selected remedy is to reduce the risk to human health and the environment associated with the organic contaminants in the vadose zone and to prevent federal and state drinking water standards from being exceeded after the 100-year institutional control period. The primary remedial action objective for the Organic Contamination in the Vadose Zone Project, as identified in the OU 7-08 record of decision, is to ensure that risks to future groundwater users are within acceptable limits and that future contaminant concentrations in the aquifer remain below federal and state maximum contaminant levels.

The major activities in the selected remedy for organic contamination in the vadose zone (Housley 2005) have been:

- Three vapor vacuum extraction with treatment units began operating in 1996 with recuperative flameless oxidation systems. Two of the units (designated as Units A and B) extracted and treated vapors from two extraction wells and one unit (designated Unit C) extracted and treated vapors from one extraction well.
- From 2001 to 2004, electrically heated catalytic oxidizers (designated Units D, E, and F) replaced the original systems. Unit D is connected to four extraction wells, Unit E is connected to four extraction wells, and Unit F is connected to 10 extraction wells. Extraction is rotated between wells to maximize removal and treatment efficiency.

- Soil-vapor monitoring wells were added to monitor the performance of the vapor extraction wells and verify the attainment of remedial action objectives. Samples are collected monthly from 141 vapor ports within and in the immediate vicinity of the SDA boundary, and quarterly from an additional 33 ports outside the SDA.

General trends show a decreasing areal extent of the plume and that overall volatile organic compound concentrations are decreasing. The selected remedy does not include the removal of buried waste from the SDA. Using the selected remedy for this remaining buried waste could extend the timeframe required to achieve remedial action objectives because the remaining organic waste could act as a long-term source of vadose zone organic contamination.

5.2 Pad A

Pad A at RWMC was identified for a remedial investigation and feasibility study under the Federal Facility Agreement and Consent Order. The Pad A record of decision (DOE-ID 1994b) documents the results of the remedial investigation and feasibility study and the selected remedy.

Pad A, located inside the SDA, was constructed in 1972 for disposal of packaged solid mixed waste (i.e., hazardous waste contaminated with radioactive material) primarily from the Rocky Flats Plant. The waste was packaged in 18,232 55-gal drums and 2,020 1.2 × 1.2 × 2.1-m (4 × 4 × 7-ft) plywood boxes that were placed at Pad A from September 1972 until August 1978. Each container had at least one polyethylene liner with most containing double liners. The drums containing waste were carefully stacked on the pad, with the drums reaching a maximum of eleven high, and boxes stacked a maximum of five high. At the completion of container placement activities, waste materials occupied approximately 40% of the total pad area.

Waste stored on Pad A is primarily composed of nitrate salts, depleted uranium waste, and sewer sludge. Other miscellaneous waste includes other inorganic salts, dirt, concrete and other materials, and generated radioactive waste, such as laboratory waste, counting sources, and uranium standards.

Closure of Pad A was performed by placing plywood or polyethylene over the exposed containers. Both types of coverings were placed in some areas with exposed containers; however, other areas remained uncovered. Next, the entire waste pile was covered with a soil layer ranging from 0.9- to 1.8-m (3- to 6-ft) thick, and then the area was seeded with crested wheat grass to minimize soil erosion.

Performance standards to protect groundwater identified in the record of decision included the following:

- Maintaining soil cover to prevent excessive moisture infiltration
- Ensuring erosion is monitored and controlled to limit soil loss
- Monitoring the vadose zone directly under Pad A for early indication of migration of contaminants (Parsons 1995).

The existing slopes were recontoured to four horizontal to one vertical (4:1) on the north, east, and west slopes, 2.5:1 on the south slope, and the top of Pad A was graded to have a minimum 5% slope. The 2.5:1 slope on the south side was selected to minimize impact on an adjacent road. The south slope was covered with a geotextile fabric and 20.3 m (8 in.) of rock armor. Five vertical boreholes were drilled adjacent to Pad A and one horizontal borehole was drilled beneath Pad A for installation of lysimeters and neutron access tubes for early detection of potential release of contaminants to the environment.

Pad A contains no buildings or structures.

5.3 Operable Unit 7-10 Interim Action

In October 1993, the *Record of Decision: Declaration of Pit 9 at the Radioactive Waste Management Complex Subsurface Disposal Area at the Idaho National Engineering Laboratory, Idaho Falls, Idaho* (DOE-ID 1993) was signed for OU 7-10 (Pit 9), which established a staged interim action path forward for OU 7-10. Operable Unit 7-10 is a 1-acre (0.4-ha) portion of the 97-acre (39-ha) area of unlined pits and trenches within the SDA where TRU, mixed, and low-level waste was disposed of before 1970.

In 1994, the INL management and operations contractor (Lockheed Idaho Technologies Company) awarded a fixed-price subcontract to Lockheed Environmental Systems and Technologies. In January 1995, an explanation of significant differences document (DOE-ID 1995) was released that changed the OU 7-10 record of decision cost estimate from \$127.8 million to \$264 million. In June 1998, Lockheed Martin Idaho Technologies Company terminated the Lockheed Martin Advanced Environmental Systems subcontract for default. In August 1998, another explanation of significant differences document for OU 7-10 (DOE-ID 1998) was released that established a staged interim action.

The DOE, State of Idaho, and U.S. Environmental Protection Agency adopted a three-stage approach to complete the project. The stages of the OU 7-10 cleanup are described in the following subsections.

5.3.1 Stage I

The purpose of Stage I subsurface exploration was to obtain data to support Site II stage selection for the limited excavation and retrieval of buried TRU waste. To meet the objectives of Stage I, a 12.2 × 12.2-m (40 × 40-ft) study area was selected based on a review of inventory records of OU 7-10 and the results of geophysical surveys of the pit. Tipped steel casings were driven into the OU 7-10 study area and information was collected using data-logging instruments inserted in these probe holes. Based on conclusions from this downhole logging, locations were to be selected from which to collect core samples for soil and waste studies.

Stage I was divided into two phases. Phase I included probing operations with no direct access to OU 7-10 waste. Phase II included core sample retrieval and analysis and bench scale treatability studies involving the collection of core materials from six locations in OU 7-10, including the waste zone. During Phase II, radioactive materials were to be brought to the surface and transferred to shipping containers. In April 2000, work on the coring system was discontinued and an alternate plan was developed based on the use of instrumented probes to provide similar data. The probes included moisture probes, vapor port probes, lysimeter probes, tensiometer probes, and visual probes. Stage I objectives were effectively met with the selection of the location for Stage II demonstration retrieval area.

5.3.2 Stage II

Stage II included the limited retrieval and excavation in selected areas of OU 7-10 for obtaining materials for pilot-scale treatability studies, in situ and ex situ treatment tests, and characterization of waste and soils. The retrieval demonstration effort included excavation of soils and waste from a 6.1 × 6.1-m (20 × 20-ft) area representing about 1% of the total waste volume of OU 7-10.

The Stage II 90% design was jointly developed by the U.S. Department of Energy Idaho Operations Office, the Idaho Department of Environmental Quality, and the U.S. Environmental Protection Agency (DOE-ID 2000b). It was a complex design that provides for methodical retrieval and precise recovery of characterization data (i.e., control similar to an archaeological excavation). Because the Stage II 90% design was time consuming to build and operate, DOE requested a schedule extension for its implementation. The Idaho Department of Environmental Quality and the U.S. Environmental Protection Agency denied the request, leading DOE to implement a formal dispute resolution process prescribed by the INL Federal Facility Agreement and Consent Order. As part of the dispute resolution process, the INL conducted a study to find a safe, faster, and less costly means to conduct the Stage II retrieval demonstration (INEEL 2001).

Based on the results of analyses conducted as part of this study (INEEL 2001), the glovebox excavator method was selected as the Stage II retrieval demonstration approach because it is a much simpler design than the earlier Stage II remote operations design. The glovebox excavator method is described below.

5.3.3 Stage III

Stage III, full-scale remediation activities depend on the remedial action defined in the WAG 7 record of decision (DOE-ID 1993). The Phase III design milestone was met by the *Conceptual Design for the Accelerated Retrieval Project at Area G of Pit 4 within the Radioactive Waste Management Complex* (Austad 2004). Milestones are in place for start of construction by 3/31/2008.

5.4 Glovebox Excavator Method

The glovebox excavator method excavator boom and bucket were housed inside a retrieval confinement structure located over the excavation site while the operator and other components were located outside the confinement structure and within a weather enclosure (DOE-ID 2004a). Locating the excavator operator and material packaging and handling personnel outside the confinement structure reduced radiological exposure and risk to the worker. A flexible boot seal around the boom pivot allowed the excavator cab to rock or tilt without breaking the seal. The confinement structure consisted of a steel-frame and steel-panels with Lexan windows. The confinement structure was located within a larger fabric-skinned weather enclosure. The weather enclosure (WMF-671; 8,783 ft²) is a polyvinyl, chloride-coated polyester cover stretched over a prefabricated frame that is tied to concrete anchors. This insulated, double-membrane structure meets wind, snow, and seismic standards. Material packaging gloveboxes were attached directly to the confinement structure and were also contained within the weather enclosure.

Overburden soil was removed, placed in soil sacks, and disposed of as low-level waste in the SDA. Waste retrieval operations started on January 5, 2004. As the excavator removed soil and waste materials, these materials were placed in one of three segregation gloveboxes. A track-mounted cart and a hoist in each glovebox moved materials through inspection, sampling, and drum-bagout stations. In the material packaging gloveboxes, operators filled drums with interstitial soil, debris, and sludges, taking care to ensure that incompatible types of waste were not intermixed and that fissile inventory limits were not exceeded.

Drums were stored in the interim CERCLA storage area outside WMF-671 before assay. Each newly packaged drum was taken to a drum assay trailer and assayed by gamma spectroscopy. A total of 59 m³ (77 yd³) of waste was removed. The waste excavated from the project excavation site filled 454 55-gal drums. The retrieved waste drums were stored in WMF-628. Samples of underlying underburden soils were collected after waste removal. After completion of all sampling and waste removal, a weak grout

mixture was used to backfill the excavation. Waste zone materials within the glovebox system and retrieval enclosure were removed and only residual contamination remains. The facility was then placed in warm standby.

5.5 Subsurface Disposal Area Active Low-Level Waste Pits

From 655 to 6,103 m³ (857 to 7,982 yd³) of contact-handled low-level waste and 28 to 115 m³ (36.6 to 150 yd³) of remote-handled low-level waste from generators throughout the INL Site have been disposed of in the SDA active low-level waste Pits 17, 18, 19, and 20 (see Figure 3) between 1990 and 2004 with the highest values in recent years (Parsons, Seitz, and Keck 2005). The active low-level waste pits will be closed under CERCLA and are beyond the scope of this analysis. Contact-handled low-level waste and some remote-handled low-level waste have been disposed of in an open pit (approximately 9 m [30 ft] deep) that covers an area of about 7.76 acres (3.14 ha). Specially designed, cylindrical, engineered concrete vaults are used for disposal of most of the remote-handled low-level waste (see engineered vaults in Figure 2). The engineered vaults are covered by thick concrete shielding plugs. Two hundred vaults have been constructed in the southwest corner of Pit 20 and about one third of them are full. From 1984 to 1993, remote-handled low-level waste was disposed of in soil vault rows located in the SDA and outside the current low-level waste disposal area. The soil vault rows are holes bored in the soil.

A variety of different waste packages are used for disposal in the active pits, including wooden and metal boxes, drums, soft-sided reinforced containers, and other specialized containers. Some waste is conditioned before disposal. Conditioning practices at the INL Site currently include compaction, sizing of metal and wood waste, and stabilization of liquid waste. Incineration also was used for volume reduction in the past.

Closure of the active low-level waste disposal pits will be conducted in two stages. Interim closure will be conducted annually as waste is placed in the active low-level waste pits and a thick layer of soil is placed immediately over the waste packages. The interim cover is constantly maintained to address subsidence, drainage, and other operational and safety concerns. The final closure concept will be determined through the CERCLA process underway for OU 7-13/14 and will be implemented as specified in the resulting record of decision.

5.6 Cold Test Pits

Two locations have been used at RWMC to construct surrogate buried waste pits for applied research, development, demonstration, and evaluation of remediation technologies for buried waste. These locations are Cold Test Pit South and Cold Test Pit North.

The design and construction features of these pits simulated the TRU waste pits and trenches located in the SDA. Testing at these cold test pits reduces hazards to personnel and the environment that are otherwise unavoidable in an actual disposal area.

Most of the testing has been done at Cold Test Pit South. Cold Test Pit North is located outside the fenced boundaries of RWMC and north of the SDA at the site of the old cement mixing area. It was constructed to test and demonstrate in situ thermal treatment technologies. These tests could not be performed at Cold Test Pit South because of electrical power requirements.

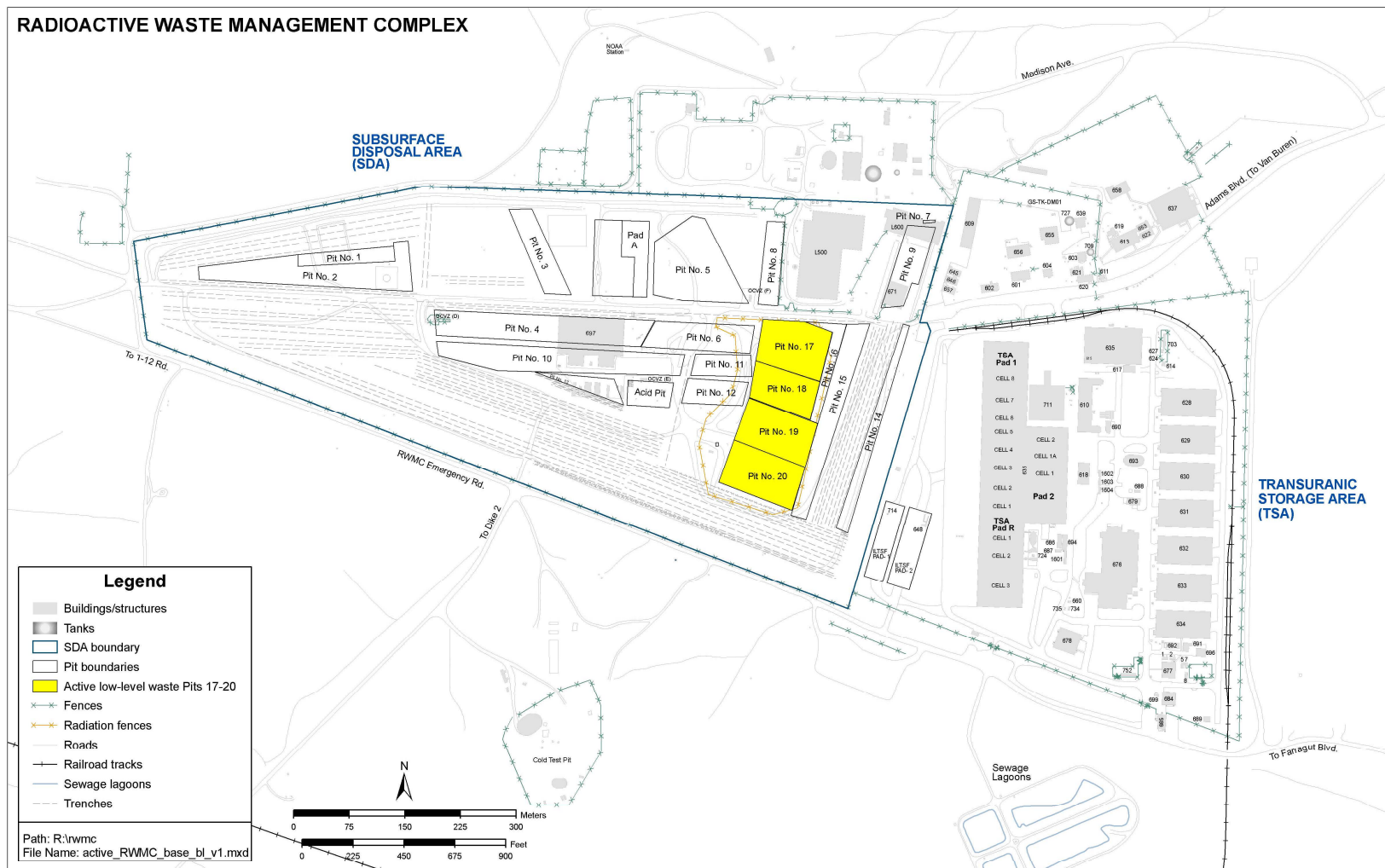


Figure 3. Active low-level waste Pits 17 through 20 at the Subsurface Disposal Area.

5.6.1 Cold Test Pit South

Cold Test Pit South comprises approximately 44,683 m² (480,969 ft²) and is located outside the fenced boundaries of RWMC and south of the SDA (see Figure 2). The first surrogate pit was constructed in this area in 1988 specifically for testing innovative technologies for treatment, retrieval, and characterization. The original Cold Test Pit consisted of five cells containing simulated waste. Rare earth tracers were used to simulate radioactive material. This pit followed the pattern of pits previously constructed in the north area to simulate the TRU buried waste pits located in the SDA. A variety of pits have been constructed for characterization and retrieval studies. The Cold Test Pit South has also been used for in situ grouting tests.

Three trailers and two yurts at Cold Test Pit South are used for administration and support. The south yurt is used to store Pit 9 mockup supplies. At the conclusion of testing, the test materials are disposed of.

5.6.2 Cold Test Pit North

Cold Test Pit North comprises approximately 6,914 m² (74,420 ft²) and is located just north of the SDA. This was the area of the first surrogate pit construction. It was situated as near to the SDA as possible outside the fenced boundaries of RWMC. The original pit was adjacent to the SDA north access road and SDA flood berm before the OU 7-10 Project was envisioned. The first surrogate waste pit was built to test the in situ grouting technology. Following closure of the first 1985 TRU test pit, the south area was used for all surrogate testing until 1999.

Pits were constructed in the north area for in situ thermal technology treatability studies because electrical power needs would be better met at the north area. The design and construction features of all the pits in this area simulated both the contents and construction of TRU waste pits located in the SDA. Before testing of the in situ vitrification system, WAG-7 management cancelled the project, and the surrogate waste, the facility, and all components related to the cold test pit are being managed for future use or testing.

5.7 Advanced Mixed Waste Treatment Project

The Advanced Mixed Waste Treatment Facility (WMF-676) was constructed by British Nuclear Fuels, Limited, to prepare TRU waste stored at the TSA for shipment to WIPP. The vast majority of the waste that the Advanced Mixed Waste Treatment Project will process resulted from the manufacture of nuclear weapons components at the Rocky Flats Plant. The waste consists of heterogeneous mixtures of various solid materials, including paper, cloth, plastic, rubber, glass, graphite, bricks, concrete, metals, nitrate salts, process sludges, miscellaneous components, and some absorbed liquids. Approximately 65,000 m³ of TRU is scheduled to be shipped for treatment or disposal at WIPP. All operations are to be completed no later than December 2018, after which the facilities will undergo RCRA closure and deactivation, decontamination, and decommissioning. It is anticipated the buildings and infrastructure will be removed before 2035 (DOE-ID 2004b).

Most of the waste (i.e., 95%) is believed to contain both RCRA hazardous waste constituents and radioactive waste; therefore, it has been classified as mixed waste. Some waste also may contain materials regulated by the Toxic Substances Control Act (15 USC § 2601 et seq.), such as polychlorinated biphenyls and asbestos (40 CFR 700, 761, 763). In addition, the waste will be broken down into two categories based on the level of radioactivity. The first is classified as alpha low-level mixed waste, which contains alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years at concentrations between 10 and 100 nCi/g. The second category is TRU waste containing

alpha-emitting radionuclides with an atomic number greater than 92 and half-life greater than 20 years at concentrations greater than 100 nCi/g. The volume of waste to be prepared and treated by the Advanced Mixed Waste Treatment Project is estimated at 25,000 m³ (32,699 yd³) of alpha low-level mixed waste and 40,000 m³ (52,318 yd³) of TRU waste.

Each container of waste will be prepared and examined before approval for shipment to WIPP. Characterization is performed primarily in buildings WMF-634, WMF-610, WMF-676, WMF 628, and WMF-635. During characterization, each container will be examined and tested to determine its contents. The characterization facilities house real-time radiography units and equipment for headspace gas sampling, drum coring, and gamma spectrometry. The containers are x-rayed in real-time radiography units. Containers are also tested using gamma spectrometry, which measures the radiation present. Drum coring is used to take a sample of the contents of certain drums. Some of the containers are also tested using headspace gas sampling, which checks the container for any harmful gases.

Waste may be repackaged, compacted, or stabilized by adding material to absorb liquids. Super compaction to reduce the volume of waste to be shipped will be performed in WMF-676. In the loading areas, the waste containers go through two major steps: payload assembly and TRU Package Transport Container-II loading. Payload assembly is performed in WMF-635. Payload assembly includes categorizing the waste into four different groups consisting of 55-gal drums or pucks (i.e., compacted drums). These four separate payloads are then individually loaded into the TRU Package Transport Container-II containers for shipping. A TRU Package Transport Container-II container is a special, double-containment vessel that is approved for waste transport. The TRU Package Transport Container-II containers are loaded in WMF-618. After the payloads are placed in the TRU Package Transport Container-II containers, the containers are put through various visual and mechanical inspections before they are certified for travel.

5.8 Engineered Barrier Test Facility

The Engineered Barrier Test Facility (see Figure 2) was designed and built to test engineered barriers in support of performance assessments of the SDA at RWMC. The test program at the Engineered Barrier Test Facility provides site-specific, multiyear data about the performance and soil hydrology of the cover under several different operating conditions. Two cover designs (i.e., a thick soil cover and a capillary barrier cover) were chosen for testing.

The test plots were installed in the test cells and instrumented in the spring of 1996. The test plots were allowed to equilibrate with the environment until the summer of 1997, when breakthrough treatments were imposed on all the test plots. These breakthrough treatments evaluate barrier recovery from breakthrough conditions. Although both types of barrier covers being tested at the Engineered Barrier Test Facility are designed to exploit the transpiration capabilities of plants to extract water that infiltrates into the covers, all test plots were maintained devoid of vegetation throughout the breakthrough treatments. The absence of vegetation allows evaluation of barrier performance under less than ideal conditions. Barrier performance during recovery from breakthrough is still being monitored and will continue to be monitored throughout the subsequent tests.

Performance evaluations of the long-term engineered barriers use soil and hydraulic properties usually determined during construction. These properties, however, may change over time. The multiyear nature of the Engineered Barrier Test Facility tests provides the opportunity to gain some insight about how the barriers may change over time and under different conditions. At the termination of all test treatments, the test plots will be excavated and soil samples will be collected from each test plot for determination of hydraulic and physical properties. The properties will be compared to the same properties determined during construction of the test plots. The thickness of each barrier layer also will be

compared to the original thicknesses to determine the nature and degree of settling during the Engineered Barrier Test Facility Project.

The long-term deployment of engineered barriers brings with it issues related to long-term monitoring and stewardship. Several activities are planned at the conclusion of the tests for the Engineered Barrier Test Facility Project to address these issues. First, all buried instruments will be retrieved and the physical condition of the instruments will be determined and recorded for future reference. Instruments should be recalibrated and the new calibration compared to the initial calibration to determine how the calibration has changed over time. Second, the geotextile liners will be examined to determine the physical condition of the liners and their ability to maintain textural boundaries.

5.9 Targeted Waste Removal and Disposition Project

The Targeted Waste Removal and Disposition Project will perform limited excavation and retrieval of selected targeted waste streams from designated areas of the SDA. Once retrieved, the waste will be repackaged into new containers, placed in interim storage, and characterized for disposal at WIPP. The targeted waste originated primarily at the Rocky Flats Plant and is contaminated with TRU radionuclides, volatile organic compounds, and various isotopes of uranium. Areas targeted for limited excavation and retrieval include portions of Pits 1, 2, 4, 5, 6, 9, and 10. This project is currently underway in Pit 4 and is scheduled to be completed in Fiscal Year 2010. Final closure of the excavated areas, as for the overall SDA, is part of the OU 7-13/14 record of decision.

The initial action in this project (referred to as the Accelerated Retrieval Project) is a non-time-critical removal action to remove TRU and other targeted waste from a selected area of approximately 0.5 acres (0.2 ha) of Pit 4. Experience to date has shown the identification of targeted waste streams through visual examination and the segregation process to be workable and practicable. The targeted waste streams consist of filters, graphite, Series 741 and 743 sludge, and uranium roaster oxides. For protection from the weather and to limit the spread of possible contamination, a temporary, removable retrieval and storage enclosure and airlock (WMF-697) was constructed to cover the retrieval area during all retrieval actions. This facility houses excavation, sampling, packaging, package decontamination equipment, and personnel and equipment ingress and egress. The retrieval enclosure and drum packaging systems are functioning as designed to provide effective control of the radiological materials being retrieved and packaged. Storage of repackaged waste drums to date has been within the RCRA-permitted storage module WMF-628 in the TSA. In the future, storage will be in the CERCLA storage facility currently under construction north of Pit 4. The Accelerated Retrieval Project is scheduled to be complete in April 2006. A set of administrative support trailers, WMF-TR-1, 2, 3, 4, 6, and 7 provide operations support, sample support, nondestructive assay, and personnel changing areas.

Additional retrieval actions are scheduled to begin in February 2006. The designated area includes the easternmost portion of Pit 4 and portions of Pit 6 directly east of the area being excavated in the Accelerated Retrieval Project. The retrieval enclosure for the Accelerated Retrieval Project will be expanded to encompass the area designated for the additional retrieval actions. A total of 13 areas have been designated for limited retrieval actions throughout the course of this project. Although precise activities will be defined based on lessons learned through the course of the initial retrieval activities, it is anticipated the activities will be similar to the activities currently underway in Pit 4.

6. REVIEW OF MANAGEMENT CONTROLS FOR THE RADIOACTIVE WASTE MANAGEMENT COMPLEX

Management controls mitigate potential releases from a facility to the environment and establish the appropriate reporting and mitigating measures to be implemented in the case of such an event. Review of such management controls is an integral part of the analysis process. The documents and procedures used at RWMC to mitigate potential releases to the environment include:

- MCP-3450, Environmental Instructions for Facilities, Processes, Materials, and Equipment
- ISO 14001, Environmental Management Systems
- Safety analysis reports (SARs) for nuclear facilities
- RCRA contingency plans
- Spill avoidance and response plans
- Emergency plan implementation MCPs
- Nuclear material inspection and storage MCPs
- Applicable technical procedures.

Technical procedures that cover operational aspects of activities at RWMC support the MCPs. The technical procedures eliminate or minimize the risk of off-normal events. The Idaho Cleanup Project contractor is required to follow sitewide program requirements in addition to the technical procedures. The program requirements include the control of physical, asbestos, and toxic substances. The management controls referenced above are discussed in the following subsections.

6.1 Safety Analysis Reports

The DOE O 5480.23, “Nuclear Safety Analysis Reports,” requires a safety analysis, documented by a SAR, to be performed for each DOE nuclear facility (SAR-4). A nuclear facility is defined in DOE Order 5480.23 as a nuclear reactor or a nonreactor nuclear facility in which activities or operations pose a potential nuclear hazard to employees or the general public and meets any of the following criteria:

- Produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium
- Conduct separation operations
- Conduct irradiated materials inspection, fuel fabrication, decontamination, or recovery operations
- Conduct fuel enrichment operations
- Perform environmental remediation or waste management activities involving radioactive materials.

The DOE Order 5480.23 also requires a hazards classification for all elements of a nuclear facility based on (1) the level of potential hazard posed by the facility to the on-Site and off-Site public, (2) risk-dominant accident scenarios, and (3) evaluations for credible and significant accident scenarios. The level of analysis and documentation for each facility must be commensurate with (1) the magnitude of the hazards being addressed, (2) the complexity of the facility and systems being relied on to maintain an acceptable level of risk, and (3) the stage of the facility life cycle for which DOE approval is sought. To meet the requirements of thoroughness and rigor, a combination of safety design, operational safety,

and institutional safety assurance provisions must be incorporated in the SAR (DOE Order 5480.23). As new facilities are constructed, an analysis of the hazard classification is performed. Therefore, all the facilities listed in this document have been fully classified per DOE Order 5480.23.

6.2 Idaho National Laboratory Emergency Plan Resource Conservation and Recovery Act Contingency Plan

The Emergency Preparedness Base Plan (PLN-114) describes the actions that will be taken at RWMC facilities to minimize hazards to human health or to the environment from fires, explosions, or any unplanned release of mixed or hazardous waste or waste constituents to air, soil, or surface water. The provisions of the plan will be carried out immediately after any event that could threaten human health or the environment. The plan has been prepared to satisfy all relevant requirements for contingency plans for facilities under the purview of RCRA as promulgated in “Standards Applicable to Generators of Hazardous Waste” (40 CFR 262.34).

The RWMC spill avoidance and response plan that establishes general policy and responsibilities for spill avoidance and response requirements for applicable operations at RWMC is found in PLN-114 in accordance with the following:

- *Environmental Compliance Planning Manual* (DOE-ID 1991b), Section 3.9.2, “Spill Avoidance and Response Plans”
- DOE Order 5500 series on emergency preparedness
- “National Pollutant Discharge Elimination System Storm Water Permit Regulations” (40 CFR 122.26)
- “General Environmental Protection Program” (DOE Order 5400.1).

Facility managers of operations that have the potential to release hazardous substances (as listed in 40 CFR 116, 302, 355, and 372) or petroleum products (from heavy equipment) to the environment are responsible to ensure that the spill avoidance and response plan requirements (DOE-ID 1991b) are implemented unless such operations are (1) covered by a RCRA contingency plan or (2) the hazardous substances are in the same form and concentration as a product packaged for distribution and use by the general public.

6.3 Hazards Assessment for the Radioactive Waste Management Complex

A hazards assessment for RWMC (i.e., HSD-3, Emergency Management Hazards Survey for the Radioactive Waste Management Complex) was performed to ensure compliance with DOE requirements pertaining to emergency planning and preparedness for operational emergencies. The “Comprehensive Energy Management Guide” (DOE Order 151.1) requires preparation of a facility-specific hazards assessment to provide a technical basis for facility emergency planning efforts. Facilities associated with each identified RWMC operation and the processes involved with the operation of each facility are the assessment focus areas. All radiological and nonradiological hazardous materials stored, used, or produced from RWMC operations are identified and screened using a threshold quantity defined by one or more of the following:

- Appendix A of the U.S. Environmental Protection Agency Superfund Amendment and Reauthorization Act Title II (40 CFR 355)

- Table 302.4, “SARA Title III Consolidated List of Chemicals” (40 CFR 302) (the threshold quantity is defined in the table as an amount five times the reportable quantity)
- “Occurrence Reporting and Processing of Operations Information” (DOE Order 232.1).

The threshold quantities for radioactive materials were obtained from “Quantities of Radioactive Materials Requiring Consideration of the Need for an Emergency Plan for Responding to a Release” (10 CFR 30.72, Schedule C).

Hazardous materials that exceed the screening criteria were characterized, and credible event scenarios having the potential to release the hazardous materials were developed. Event scenarios and the quantity of hazardous materials released were incorporated in calculations for dispersion, radiological dose, and event-credibility.

6.4 Asbestos Control Program

The Asbestos Control Program at the INL Site establishes mandatory standardized requirements for any asbestos-related work. The program is regulated by MCP-2859, “Posting Asbestos Advisory Signs,” and MCP-2862, “Asbestos Management Program Administration.” These MCPs list the requirements of administrative responsibilities, surveillance, exposure and assessment, compliance methodology, and all other aspects of regulating asbestos at the INL Site. The Asbestos Control Program Database tracks asbestos-containing material.

6.5 Toxic Substance Control Act

The Power Management Department within the INL Site Services Branch is the principal user of polychlorinated biphenyls. The department keeps records of all equipment containing polychlorinated biphenyls and provides data for reports from the department database. All polychlorinated biphenyl shipments to offsite toxic-substance disposal facilities are logged and all manifest documents and certificates of disposal are preserved. An annual records and document log report is prepared by the Environmental Affairs Directorate, with assistance from the Packaging and Transportation Departments, and is submitted to Department of Energy Idaho Operations Office by July 1 of each year. The report is an INL administrative requirement that is also required by 40 CFR 761.180(a).

As of October 1, 1985, the use of transformers containing polychlorinated biphenyls was banned by federal law if they posed an exposure risk to food or feed. If not, the transformers could be used for the remainder of their useful lives if they were registered with appropriate building owners and fire departments by December 1985. At the INL Site, all transformers under the control of the Power Management Department that contain polychlorinated biphenyls with concentrations greater than 50 ppm were replaced or retrofitted by the mid-1990s. The INL Site’s disposal policy for polychlorinated biphenyls requires disposal of all polychlorinated biphenyl-contaminated materials, including those contaminated with less than 50 ppm and more than 25 ppm, in an U.S. Environmental Protection Agency-approved disposal site (INEL 1993).

6.6 Resource Conservation and Recovery Act Closure

The RCRA provides regulation of hazardous material from its designation as waste through storage and final disposal or destruction. The facilities regulated under RCRA at the INL Site either have been clean closed or are currently scheduled for clean closure (DOE-ID 2001). All RCRA-regulated waste is managed in full compliance with applicable regulations designed to protect human health and the environment.

6.7 Fire Protection

All facilities at RWMC have adequate fire protection, as described in the *RWMC Area-Wide Fire Hazards Analysis/Fire Safety Assessment* (Gossweiler 2000). The OU 7-10 area currently has a fire system that is not charged. A hydrant is located nearby to be used to charge the system if necessary. The system will be upgraded in the near future to support increased activity in the area. New major facilities constructed over the past two years have been assessed for fire protection, and systems (i.e., fire alarms and suppression systems) have been put into place to provide necessary fire protection for these facilities.

6.8 Monitoring Activities

A comprehensive monitoring program has the following general categories:

- Compliance monitoring programs monitor drinking water wells, liquid effluent, storm water, and ground water.
- Environmental surveillance programs monitor air, surface water run-off, biota, and direct radiation.
- Operational monitoring monitors process air emissions and process liquid effluent.

Monitoring activities in the TSA involve indoor and outdoor air monitoring and subsurface water, perched water, and groundwater monitoring. Buildings are equipped with both constant air monitors and radiation area monitors for detecting air contamination. Outdoor air monitoring includes thermoluminescent dosimeters and random gamma scans. Sampling for tritiated water vapor is also performed in SVR 20. Also monitored for contamination are soil, vegetation, biota, storm runoff, and sediment from drainage areas.

Vapor ports monitor the presence of volatile organic compounds in the subsurface in the vadose zone, monthly in the immediate vicinity of the SDA, quarterly outside the SDA, and quarterly in the waste zone. Also, suction lysimeters are monitored quarterly both in the vadose zone and the waste zone. However, lysimeter samples are limited in volume and not all analyses can be performed on each sample. Twenty-three aquifer monitoring wells are both upgradient (monitored twice a year to determine background) and downgradient (monitored quarterly for compliance) of RWMC. In addition, soil moisture probes and tensiometers collect data to measure soil water pressure and moisture (Koeppen et al. 2005).

7. SUMMARY AND CONCLUSIONS

Based on this analysis of WAG 7 collocated facilities and associated management controls that are in place to prevent or mitigate releases to the environment, no collocated facilities were identified as having the potential to impact comprehensive risk at RWMC.

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Appendix A

Waste Area Group 7 Collocated Facilities

Appendix A

Waste Area Group 7 Collocated Facilities

This appendix is a list of all facilities collocated with WAG 7. It also includes cargo containers currently being used for storage and temporary trailers located in the immediate area of RWMC that are not discussed in the main report.

Facility Number and Name	Facility Description	Location
WMF-601 Radiological Control Field Office	A 469-m ² (5,044-ft ²) steel frame metal building with offices, a radiological control technician laboratory, and lunchrooms, break rooms, and locker rooms for the radiological control technicians.	Operations Area
WMF-602 RWMC Highbay	A 222 m ² (2,389 ft ²) steel frame modular multipurpose facility to support Advanced Mixed Waste Treatment Project operations.	Operations Area
WMF-603 RWMC Pumphouse	A water storage area (129 m ² [1,387 ft ²]) containing fire and domestic water for the RWMC area, a propane emergency generator, and diesel and electric fire pumps.	Operations Area
WMF-604 Change room and lunchroom	A 118-m ² (1,272-ft ²) metal building with a lunchroom and change and shower rooms for operations personnel.	Operations Area
WMF-605 Well House 87	U.S. Geological Survey monitoring Well #87, a 3.4-m ² (37-ft ²) white shed located north of the Subsurface Disposal Area, south of the Engineered Test Barrier.	Outside
WMF-606 Well House 88	U.S. Geological Survey monitoring Well #88, white shed located south of the Cold Test Pit.	Outside
WMF-607 Well House 89	U.S. Geological Survey monitoring Well #89, located west of RWMC.	Outside
WMF-609 Heavy Equipment Storage Building	A 1,037-m ² (11,166-ft ²) shelter and maintenance area for large mobile equipment.	Operations Area
WMF-609A and WMF-609B Resource Conservation and Recovery Act 90-Day Storage Area	Resource Conservation and Recovery Act 90-Day Storage Area, a 2.3-m ² (25-ft ²) metal storage building.	Operations Area
WMF-610 Stored Waste Examination Pilot Project Building	A 1,074-m ² (11,557-ft ²) preengineered metal structure used for real-time radiography, nondestructive assay, and other transuranic waste certification activities.	Transuranic Storage Area
WMF-611 Operations support facility	A 37-m ² (400-ft ²) single story steel framed prefabricated modular building used for office space.	Administration Area
WMF-613 Office building and operational support facility	A 37-m ² (400-ft ²) steel framed prefabricated modular building containing office space.	Administration Area
WMF-614 Propane vaporizer housing	A 22-m ² (238-ft ²) steel framed prefabricated modular building housing propane vaporizing equipment.	Transuranic Storage Area
WMF-615 Stored Waste Examination Pilot Plant Drum Venting System Building	A 125-m ² (1,345-ft ²) internal structure within WMF-635 used for venting waste drums.	Transuranic Storage Area
WMF-617 Stored Waste Examination Pilot Plant Maintenance Facility	A 139-m ² (1,500-ft ²) steel framed prefabricated modular building used for general maintenance work.	Transuranic Storage Area

(continued).

Facility Number and Name	Facility Description	Location
WMF-618 Transuranic Package Transport Container-II Loading Facility	A 139-m ² (4,000-ft ²) two-story, single floor, steel framed, prefabricated modular building used to load payload assemblies in Transuranic Package Transport Container-II shipping casks.	Transuranic Storage Area
WMF-619 communications building and dial room	An 88-m ² (945-ft ²) building used for RWMC telecommunications support equipment.	Administration Area
WMF-620 Work Control Center Facility (Operations) Trailer	A 135-m ² (1,456-ft ²) single story trailer used for office space.	Operations Area
WMF-621 Work Control Center Support Facility (Operations) Trailer	A 135-m ² (1,456-ft ²) single story trailer used for office space.	Operations Area
WMF-622 Office annex trailer	A 135-m ² (1,456-ft ²) trailer providing office space for RWMC personnel.	Administration Area
WMF-624 Transuranic Storage Area propane system fire riser enclosure	A 16-m ² (64-ft ²) single story steel framed building housing the firewater system riser.	Transuranic Storage Area
WMF-627 Propane pump enclosure	A 13.3-m ² (143-ft ²) prefabricated modular building housing the propane pump system.	Transuranic Storage Area
WMF-628 Type II Storage Module No. 1	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³) used by the Advanced Mixed Waste Treatment Project for transuranic waste characterization.	Transuranic Storage Area
WMF-629 Type II Storage Module No. 2	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).	Transuranic Storage Area
WMF-630 Type II Storage Module No. 3	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).	Transuranic Storage Area
WMF-631 Type II Storage Module No. 4	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).	Transuranic Storage Area
WMF-632 Type II Storage Module No. 5	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).	Transuranic Storage Area
WMF-633 Type II Storage Module No. 6	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³).	Transuranic Storage Area
WMF-634 Type II Storage Module No. 7	Transuranic waste storage area of 2,676 m ² (28,800 ft ²) with a storage capacity of 112,400 m ³ (147,014 yd ³). This facility is used by the Advanced Mixed Waste Treatment Project for transuranic waste characterization.	Transuranic Storage Area
WMF-635 Type I Storage Module	This 3,786-m ² (40,750-ft ²) storage module is a heated building used for transuranic waste characterization.	Transuranic Storage Area
WMF-636 Transuranic Storage Area Retrieval Enclosure	A 29,171-m ² (313,994-ft ²) transuranic waste retrieval enclosure area.	Transuranic Storage Area
WMF-637 Operations Control Building	A 2,230-m ² (24,003-ft ²) area for offices and guard gate.	Administration Area
WMF-639 Firewater pumphouse No. 2	A 66-m ² (1,787-ft ²) houses the primary electrical and diesel fire and a 1,136-L (300-gal) diesel tank.	Operations Area
WMF-641 Vapor Vacuum Extraction Monitoring Well D02	A 1.5-m ² (16-ft ²) monitoring well shed.	Subsurface Disposal Area

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Facility Number and Name	Facility Description	Location
WMF-643 Vapor Vacuum Extraction Monitoring Well 89-02D	A 1.5-m ² (16-ft ²) monitoring area.	Subsurface Disposal Area
WMF-645 Construction support trailer	A 146-m ² (1,568-ft ²) work support area for construction.	Operations Area
WMF-646 Field support trailer	A 146-m ² (1,568-ft ²) office area.	Operations Area
WMF-648 Intermediate-Level Transuranic Storage Facility Trailer	A 20-m ² (215-ft ²) vault-monitoring area.	Transuranic Storage Area
WMF-653 Office annex No. 2 trailer	A 112-m ² (1,206-ft ²) office area.	Administration Area
WMF-655 Material Handling Facility	A 509-m ² (5,483-ft ²) material storage area.	Operations Area
WMF-656 Maintenance Facility	A 465-m ² (5,005-ft ²) maintenance and fabrication area.	Operations Area
WMF-657 Construction field support trailer	A 146-m ² (1,568-ft ²) office area.	Operations Area
WMF-658 RWMC office building	A 437-m ² (4,704-ft ²) office area.	Administration Area
WMF-660 Automatic transfer switch building	Houses automatic transfer switching system for the Transuranic Storage Area Retrieval Enclosure.	Transuranic Storage Area
WMF-661 Hazardous materials storage	A 128-ft ² (12-m ²) storage area for hazardous and flammable materials.	Operations Area
WMF-664 Warehouse	A 325-m ² (3,500-ft ²) sprung structure that was used as a warehouse.	OU 7-10 Administrative Area
WMF-665 Chemical Off-Loading Facility	A 489-m ² (5,265-ft ²) covered pad. Covering is constructed of a metal frame and metal roof. Construction of this structure was not completed.	OU 7-10 Administrative Area
WMF-666 Retrieval building	A 1,795-m ² (19,320-ft ²) metal frame building covered with insulated metal panels. Construction of this building was never completed.	OU 7-10 Administrative Area
WMF-667 Processing building	A 7,656-m ² (82,411-ft ²) building that is a combination of reinforced concrete and metal frame construction. Construction of structure was not completed.	OU 7-10 Administrative Area
WMF-668 Utility building	A 907-m ² (9,760-ft ²) building of metal frame and panel construction. Construction of the structure is complete, but not all equipment was installed.	OU 7-10 Administrative Area
Radiological Control Trailer	A 41-m ² (440-ft ²) office trailer that was used as a radiological control point for the OU 7-10 Administrative Area.	OU 7-10 Administrative Area
Operations office	A 134-m ² (1,440-ft ²) modular office structure that did not contain hazardous materials.	OU 7-10 Administrative Area
Cooling tower building	A 77-m ² (830-ft ²) metal frame and panel construction used for equipment storage.	OU 7-10 Administrative Area

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Facility Number and Name	Facility Description	Location
Vehicle maintenance shop	A 169-m ² (1,823-ft ²) wooden frame structure with concrete floor.	OU 7-10 Administrative Area
Carpenter shop	Building is wooden frame. This structure contained the construction carpenter's shop.	OU 7-10 Administrative Area
WMF-671 Weather Enclosure Structure	An 816-m ² (8,783-ft ²) weather enclosure structure used in the Glovebox Excavator Method Project.	Subsurface Disposal Area
WMF-676 Advanced Mixed Waste Treatment Facility	A 21,825-m ² (234,922-ft ²) facility used for characterization of transuranic waste containers and super compaction.	Transuranic Storage Area
WMF-677 Advanced Mixed Waste Treatment Project Office Complex	A 334.5-m ² (3,600-ft ²) modular prefabricated building used as office facilities for the Advanced Mixed Waste Treatment Project.	Transuranic Storage Area
WMF-678 Advanced Mixed Waste Treatment Project Office Complex	A 632-m ² (6,800-ft ²) modular prefabricated building used as office facilities for the Advanced Mixed Waste Treatment Project.	Transuranic Storage Area
WMF-679 Advanced Mixed Waste Treatment Project Workshop	A 632-m ² (1,500-ft ²) modular prefabricated building used as a general maintenance, carpentry shop.	Transuranic Storage Area
WMF-680 Construction Operations Trailer	A 67-m ² (720-ft ²) construction management office trailer.	Outside
WMF-681 Construction Operations Trailer	A 67-m ² (720-ft ²) construction management office trailer.	Outside
WMF-684 Assembly/break building	A 334.5-m ² (3,600-ft ²) break room, eating area, and assembly area.	Transuranic Storage Area
WMF-685 Accountability building	A 14.6-m ² (157-ft ²) modular prefabricated building used as a guard house.	Transuranic Storage Area
WMF-686 Advanced Mixed Waste Treatment Project Shower Trailer	A 111.5-m ² (1,200-ft ²) personnel locker room, change room, and showers.	Transuranic Storage Area
WMF-687 Break trailer—retrieval staff	A 28-m ² (300-ft ²) trailer.	Transuranic Storage Area
WMF-688 Break trailer	A 28-m ² (300-ft ²) trailer.	Transuranic Storage Area
WMF-689 Rolling Stock Maintenance Facility	A 61-m ² (660-ft ²) timber building used as a vehicle maintenance shop.	Transuranic Storage Area
WMF-690 Carpenter shop	A 146-m ² (1,570-ft ²) timber building used as a carpentry shop.	Transuranic Storage Area
WMF-691 Warehouse office trailer	An 82-m ² (882-ft ²) warehouse office trailer.	Transuranic Storage Area
WMF-692 Site warehouse	A 134-m ² (1,440-ft ²) prefabricated modular building used for general storage.	Transuranic Storage Area
WMF-693 Consumable storage	A 139-m ² (1,495-ft ²) prefabricated modular building used for general storage.	Transuranic Storage Area
WMF-694 Training facility	A 126-m ² (1,360-ft ²) prefabricated modular building containing classrooms used for training.	Transuranic Storage Area

(continued).

Facility Number and Name	Facility Description	Location
WMF-696 Storage facility	A 156-m ² (1,680-ft ²) prefabricated modular building used for general storage.	Transuranic Storage Area
WMF-697 Retrieval Enclosure	A 5,257-m ² (56,588-ft ²) retrieval enclosure covering the Accelerated Retrieval Project in Pit 4.	Subsurface Disposal Area
Two propane tanks	Two 3,785-L (1,000-gal) tanks located west of WMF-697 are used for the heater and air handler for Airlock 1.	Subsurface Disposal Area
Four propane tanks	Four 3,785-L (1,000-gal) propane tanks south side of WMF-697 are used for the heater and air handler for Airlock 2.	Subsurface Disposal Area
WMF-699 Assembly trailer restroom	An 18.6-m ² (200-ft ²) trailer containing restrooms.	Transuranic Storage Area
WMF-702 Liquid corrosive chemical disposal	A 300 m ³ (10,584 ft ³) disposal area shutdown pending decontamination and decommissioning, located east of RWMC, south of Adams Boulevard and has no structures.	Outside
WMF-703 Propane storage tank	A 113,562-L (30,000-gal) propane tank.	Transuranic Storage Area
WMF-704 Timber bridge	A timber bridge spanning the drainage channel at the southern boundary of the Operations Area.	Operations Area
WMF-708 Sump pit	A 0.9 m × 0.9-m (3 ft × 3-ft) concrete box south of Gate SA25.	Outside
WMF-709 Water storage tank	A 946,353-L (250,000-gal) domestic water storage tank.	Operations Area
WMF-710 Concrete bridge	An 11-m (36-ft) concrete bridge spanning the drainage channel at the southern boundary of the Operations Area.	Operations Area
WMF-711 Air Support Building-II Foundation, Floor, and Airlock	This is the 2,090-m ² (22,500-ft ²) foundation, floor, and airlock of Air Support Building II.	Transuranic Storage Area
WMF-714 Intermediate-Level Transuranic Storage Facility Pad 1	Storage-containing pad for intermediate-level storage of intermediate-level transuranic waste containers (radiation levels between 200 mR/hour and 4,500 R/hour) with vaults 41, 61, 76, and 122 cm (16, 24, 30, and 48 in.) in diameter.	Transuranic Storage Area
WMF-717 Helicopter landing pad	A 232-m ² (2,492-ft ²) helicopter landing pad.	Outside
WMF-720 Intermediate-Level Transuranic Storage Facility Pad 2	Storage of intermediate-level (radiation levels between 200 mR/hour and 4,500 R/hour) transuranic containers with 41- and 76-cm (16- and 30-in.) diameter vaults.	Transuranic Storage Area
WMF-723 Transuranic Storage Area Retrieval Airlock	A 214-m ² (2,300-ft ²) airlock for the WMF-636 Transuranic Storage Area retrieval enclosure.	Transuranic Storage Area
WMF-724 Glycol Loop Enclosure	Transuranic Storage Area retrieval enclosure glycol loop, 9.3 m ² (100 ft ²).	Transuranic Storage Area
WMF-726 Adams Boulevard bridge		Outside
WMF-727 Firewater storage tank	A 946,353-L (250,000-gal) firewater storage tank.	Operations Area
WMF-731 RWMC sewage lagoon	The lagoon consists of four separate ponds south of RWMC, and handles sanitary wastewater only.	Outside
WMF-732 Propane tank	A 45,425-L (12,000-gal) propane tank providing propane to WMF-637.	Administration Area

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Facility Number and Name	Facility Description	Location
WMF-734 Standby Generator Enclosure	Transuranic Storage Area retrieval area standby generator enclosure containing a 500-kW generator.	Transuranic Storage Area
WMF-735 Diesel tank	Transuranic Storage Area retrieval area diesel tank.	Transuranic Storage Area
WMF-737 Fuel tank	A 1,022-L (270-gal) gasoline tank for fueling vehicles.	Operations Area
WMF-738 Propane tank	A 1,893-L (500-gal) propane tank to fuel the pump in WMF-603.	Operations Area
WMF-750 Temporary fire riser building	A 5.9-m ² (64-ft ²) building south of WMF-657 used for the Glovebox Excavator Method Project.	Operations Area
WMF-752 Propane storage tank	A 170,344-L (45,000-gal) propane tank to support the Advanced Mixed Waste Treatment Facility and a smaller diesel feed backup generator for the WMF-634 process equipment.	Transuranic Storage Area
WMF-1601 Training office trailer	This is a 66.9-m ² (720-ft ²) trailer containing Training Administration Offices.	Transuranic Storage Area
WMF-1602 Break room trailer	This is a 28-m ² (300-ft ²) trailer containing a break room, eating area, and assembly area.	Transuranic Storage Area
WMF-1603 Break room trailer	This is a 28-m ² (300-ft ²) trailer containing a break room, eating area, and assembly area.	Transuranic Storage Area
WMF-1604 Shift Team Lead Office Trailer	This is a 28-m ² (300-ft ²) trailer containing office facilities.	Transuranic Storage Area
WMF-TR-1v Accelerated Retrieval Project Sample Support Trailer	A 156-m ² (1,680-ft ²) trailer located south of WMF-697.	Subsurface Disposal Area
WMF-TR-2 Accelerated Retrieval Project Operations Support Trailer	A 132-m ² (1,420-ft ²) trailer located south of WMF-697.	Subsurface Disposal Area
WMF-TR-3 Accelerated Retrieval Project Nondestructive Assay East Trailer	A 19.5 m ² (7 × 30-ft) trailer located south of WMF-697.	Subsurface Disposal Area
WMF-TR-4 Accelerated Retrieval Project Nondestructive Assay West Trailer	A 19.5-m ² (7 × 30-ft) trailer located south of WMF-697.	Subsurface Disposal Area
WMF-TR-6 Accelerated Retrieval Project Men's Change Trailer	A 37-m ² (400-ft ²) located south of WMF-697.	Subsurface Disposal Area
WMF-TR-7 Accelerated Retrieval Project Women's Change Trailer	A 37-m ² (400-ft ²) located south of WMF-697.	Subsurface Disposal Area
WMF-CT-1 Commissioning Trailer #1	A 28-m ² (300-ft ²) commissioning trailer.	Transuranic Storage Area
WMF-CT-2 Commissioning Trailer #2	A 28-m ² (300-ft ²) commissioning trailer.	Transuranic Storage Area
WMF-CT-5 Commissioning Trailer #5	A 28-m ² (300-ft ²) commissioning trailer.	Transuranic Storage Area
WMF-CT-7 Commissioning Trailer #7	A 28-m ² (300-ft ²) commissioning trailer.	Transuranic Storage Area

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Facility Number and Name	Facility Description	Location
WMF-CT-8 Commissioning Trailer #8	A 28-m ² (300-ft ²) commissioning trailer.	Transuranic Storage Area
Diesel tanks	A 7,571-L (2,000-gal) concrete vault located at the south east corner of WMF-697.	Subsurface Disposal Area
North Administrative Trailer Cold Test Pit	Office space for Cold Test Pit operations.	Cold Test Pit
Support Trailer Cold Test Pit	Storage space for Cold Test Pit operations.	Cold Test Pit
South Administrative Trailer Cold Test Pit	Office space for Cold Test Pit South operations.	Cold Test Pit
North Yurt Cold Test Pit	Chemical and other test material storage for Cold Test Pit operations.	Cold Test Pit
South Yurt Cold Test Pit	Contains Pit 9 mock-up equipment and supplies.	Cold Test Pit
North Test Pits Cold Test Pit	Pits that contain buried simulated waste.	Cold Test Pit
South Test Pits Cold Test Pit	Pits used to test grouting techniques and materials and contain buried simulated waste.	Cold Test Pit
Cold Test Pit North	Simulated test pits for in situ vitrification testing were created. The In Situ Vitrification Project was cancelled and the simulated test pit contents, including drums of nitrate salts and organic sludges, were not retrieved.	Cold Test Pit
West Storage Area	The West Storage Area is outside the northwest corner of the Subsurface Disposal Area. It contains two wooden sheds, two cargo containers, four concrete vaults, and 55-gal drums.	Outside
Cargo container RSU #338	Contains well heads and miscellaneous material.	Cold Test Pit
Cargo container RSU #339	Contains well heads and miscellaneous material.	Cold Test Pit
Hazardous storage cargo container	Contains drilling supplies, located east of south and north yurt.	Cold Test Pit
Cargo container RSU #620	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #619	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #616	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #615	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #370	Contains supplies, north of facility fence.	Outside
Cargo container RSU #369	Contains empty 55-gal drums, north of facility fence.	Outside
Cargo container RSU #376	Contains supplies, north of facility fence.	Outside
Cargo container RSU #390	Contains office supplies, north of facility fence.	Outside
Cargo container RSU #389	Unknown: locked, north of facility fence.	Outside
Cargo container RSU #388	Unknown: locked, north of facility fence.	Outside
Cargo container RSU #387	Unknown: locked, north of facility fence.	Outside
Cargo container RSU #386	Unknown: locked, north of facility fence.	Outside
Cargo container RSU #385	Contains electrical supplies, north of facility fence.	Outside

(continued).

Facility Number and Name	Facility Description	Location
Cargo container RSU #384	Contains electrical supplies, north of facility fence.	Outside
Cargo container RSU #383	Contains wood, carpenter supplies, north of facility fence.	Outside
Cargo container RSU #382	Contains carpenter supplies, north of facility fence.	Outside
Cargo container RSU #381	Contains office supplies.	Outside
Cargo container RSU #380	Contains ladders.	Outside
Cargo container RSU #379	Contains pipe fitter supplies.	Outside
Cargo container RSU #352	Contains spill response equipment and cardboard boxes.	Outside
Cargo container RSU #618	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #617	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #603	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #604	Contains Accelerated Retrieval Project supplies, north of facility fence.	Outside
Cargo container RSU #366	Contains electrical motors, north of facility fence.	Outside
Cargo container RSU #371	Contains PortaCool units, 55-gal drums (not metal), north of facility fence.	Outside
Cargo container RSU #368	Contains lifting fixtures, quality materials (locked), north of facility fence.	Outside
Construction Support Trailer	Outside, north fence of the Subsurface Disposal Area.	Outside
Hazard storage cargo container	Empty, north of facility fence.	Outside
TR-28	Trailer staged for moving from area, north of the OU 7-10 Administrative area, outside fence.	Outside
Cargo container RSU #224	North of WMF-697, outside fence.	Outside
Cargo container RSU #335	North of WMF-697, outside fence.	Outside
Cargo container RSU #633	North of WMF-697, outside fence.	Outside
Cargo container RSU #CC-2	North of WMF-697, outside fence.	Outside
Cargo container RSU #336	North of WMF-697, outside fence.	Outside
Cargo container—No identifier	North of WMF-697, outside fence.	Outside
Cargo container RSU #378	Located north of WMF-609.	Operations Area
Cargo container RSU #391	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #360	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #348	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #355	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #375	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #374	6.1 m (20 ft) in length, behind WMF-655 (north).	Operations Area
Cargo container RSU #349	Contains carpenter supplies, scaffolding, west of WMF-661.	Operations Area
Cargo container RSU #345	Contains electrical supplies, west of WMF-661.	Operations Area
Cargo container #214192	Contains respirators and excess material from Rocky Flats Plant, west of WMF-655.	Operations Area

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Facility Number and Name	Facility Description	Location
Cargo container #203089	Contains respirators and excess material from Rocky Flats Plant, west of WMF-655.	Operations Area
Cargo container RSU #363 (4057497)	20 ft, contains light stands, generator, and steam cleaner, west of WMF-656.	Operations Area
Wooden storage shed	6 × 8 ft, north of WMF-656, signed posted on shed “Universal Waste Storage.”	Operations Area
Glovebag sample trailer	E-71889 (Government license plates) south of vapor vacuum extraction with treatment Unit D.	Subsurface Disposal Area
Hazard storage building, cargo container # RWMC-SDA-CARGO A	A Comprehensive Environmental Response, Compensation, and Liability Act staging area, contains sampling and monitoring supplies, east of vapor vacuum extraction with treatment Unit D.	Subsurface Disposal Area
Hazardous storage cargo sample preparation container	Contains sample preparation supplies.	Subsurface Disposal Area
Cargo container RSU # 356	Organic Contamination in the Vadose Zone storage, east of WMF-697.	Subsurface Disposal Area
Cargo container RSU # 357	Organic Contamination in the Vadose Zone storage, east of WMF-697.	Subsurface Disposal Area
Radiological control technician trailer #028496	North of WMF-697.	Subsurface Disposal Area
Temporary guard house trailer	#181628, located north of WMF-697.	Subsurface Disposal Area
Cargo container RSU #344	Contains mechanical supplies.	Subsurface Disposal Area
Cargo container RSU #377	Contains mechanical supplies, labor equipment.	Subsurface Disposal Area
Concrete vault #418577-2A	High voltage vault.	Subsurface Disposal Area
Concrete vault #418577-2B	High voltage vault.	Subsurface Disposal Area